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INDEX TO THE SEVENTY-SECOND VOLUME.

Abbot, Dr. S. L., appointed visiting physician to Mass. General Hospital, 106; case of variolous roseola, 281
Abscess, of brain, caused by fracture of occipital bone by a bullet, 100; retropharyngeal, 508
Accoucheurs, puerperal fever propagated by, 86
Action of depressing causes in producing structural change; pathological anatomy of pneumonia, 229
Address to graduating class of Harvard University, 269
Advertising by physicians, resolutions of the New York State Medical Society on, 106
Air in uterine veins, death from, 367
Almshouses, State, cause of mortality in, 44
Amaurosis, simulation of, 201
American Medical Association, 24, 47, 303, 383, 397, 415, 433
American Ophthalmological Society, annual meeting, 452
Anachronism in medical education, 306
Anæsthesia by chemically pure ether, 288
Aneurism, in young people, cause of, 109; of the innominata, 19
Animals, scarlet fever in, 107
Anthelmintic properties of benzine, 58
Aorta, spontaneous laceration of, 80
Apoplexy, case of, 182
Appointments in Yale College, 88
Appointment of Dr. S. L. Abbot as visiting physician to Mass. General Hospital, 106
Amor-clad ships, sanitary condition of, 87
Army, French, mortality in the, 248
Army Medical Staff, 323
Army, order concerning death from anæsthetics in the, 168
Arsenic as a medicine, 176
Association, American Medical, 24, 47, 303, 383, 397, 415, 433
Asthma, spasmodic, hot brandy in, 287

Bacteridia and malignant pustule, 486
Bantingism and obesity, 457
Bartlett, Dr. Levi S., death of, 167
Baths and swimming schools, 430
Becker, Dr. Alexander R. Fiske Fund Prize Essay on gun-shot wounds, 49, 72, 91, 113
Beef, entozoa in, 207
Benzine, anthelmintic properties of, 58
Bibliographical notices, 61, 160, 243, 425, 450
Bigelow, Dr. Henry J. Welcome address to American Medical Association, 383
Births, plural, 534
Births and deaths in Hartford, Conn., 108
Bladder, pathology and therapeutics of acute catarrh of, 170
Blumenbach, account of, 347
Borland, Dr. J. N. Cases of cerebro-spinal meningitis, 309; death following catamenial suppression, 373
Boston Hospitals, 222
Boston Society for Medical Improvement, 18, 80, 100, 182, 280, 360, 467
Boylston prize for 1865, 455
Brazil, letter from, 531
Brown-Séquard, Dr., in Dublin, 166
Butler Hospital for the Insane, statistics of the, 63

Caffeine in the Kola-nut, 266
Calculi, urinary, solvent treatment of, 447
Camp diseases of the United States armies, 61
Capron, Dr. George. Deformities of pelvis, 437; on rupture of membranes to facilitate labor, 336
Case, Dr. M. W. Brandy in spasmodic asthma, 286; letter from, 246; sudden death in labor, 454
Catamenial suppression, death, 373
Cataract, Jacobson's method of extraction, 489
Cerebro-spinal meningitis, at Palmer, Mass., 369; cases in City Hospital, 309; its relation to typhus, 480
Cellular pathology, Virchow and the, 267
Charities, Massachusetts State, 101
Cheever, Dr. D. W. Leucocythæmia, 20; ovariotomy, case of, 197
Chest, wounds of the, 9, 29; treatment by sealing unjustifiable, 169
Child-bed, diet of, 134
Children, Liebig's soup for, 141, 148, 166, 185
Chlorodyne, an imitation of, 431
Chloroform, death of a surgeon by, 288
Chloroform deaths, three more, 123
Chinese beauty's foot, 186
Chinese doctor, 187
Chittenden County, Vt., Medical Society, 67
Cincinnati Medical College, commencement at, 187; branch of Sanitary Commission, 187
Clarke, Dr. E. H. Action of narceine, 349
Clinical lectures on scrivener's palsy, 155, 199
Coale, Dr. W. E., account of his death, 265, 374; resolutions on death of, 307
Coalfields in Pennsylvania, 328
College, Philadelphia Dental, ditto. of Pharmacy, ditto. Chicago Medical—commencement at and graduates of, 248

College, Toland Medical, in San Francisco, 187; Cincinnati Medical, 187
Colored soldiers, hospital for at Nashville, 108
Commencement at Harvard Medical School, 107
Commencement at and graduates of, Philadelphia Dental College, Philadelphia College of Pharmacy, Chicago Medical College, 248
Commencement exercises at Harvard Medical School, 144; list of graduates at, 145
Congenital interventricular opening or rupture of septum of the heart, 209
Congenital tumors, containing fœtal structures, 417
Conjunctivitis, nitrate of silver and sulphate of copper in, 517
Connecticut River Valley Medical Association, annual meeting of, 326
Connecticut State Medical Society, 368
Conservative surgery in gun-shot wounds of thigh, 9, 29
Convergent strabismus a symptom and not a primary affection, 89
Convulsions, puerperal, case of, 281
Corpulency and leanness, 25
Cotting, Dr. B. E. Letter from, 531
Cowles, Dr. C. W. Case of birth of a child through a lacerated anus and perinæum, spontaneous recovery, 131
Creasote in sycosis, 327

Daniels, Dr. E. Operation for hare-lip, 451
Davis, Dr. N. S. Address to the American Medical Association, 386, 432
Death, by sewage, 509; by suffocation, 279; during labor, sudden, 454; following catamenial suppression, 373; sudden, in labor, 284, 335; of a surgeon, by chloroform, 288
Dental College in New York, 268
Dental Society Iowa, resolution of concerning dental graduates, 188
Derby, George, surgeon U. S. V. On the treatment of chest wounds, by sealing, 169
Derby, Dr. Hasket. On convergent strabismus, 89; case of retinitis pigmentosa, 149
Diet of child-bed, 134
Digitalis, therapeutical and physiological action of, 300
Dinsmoor, Dr. S. M., on a fatal case of diphtheria by inoculation, 175
Diphtheria by inoculation, fatal case of, 175
Disinfectant, a useful; note from Dr. M. F. Gavin, 47
Dispensary, New York, patients in, 283
Doctors, a tribute to, 145

Ear, malformation and diseases of the, 247
Ellis, Dr. Calvin. Action of depressing causes in producing structural change, the pathological anatomy of pneumonia, 229; congenital tumors containing fœtal structures, 417; spontaneous laceration of the aorta, two cases of, 80
Elm bark a remedy for tape worm, 132
Encephaloid disease of stomach, 468
Entozoa in veal and beef, 207
Epidemic, the Russian, 262; official account of, 377
Ether, sulphuric, protracted use of without fatal result, 57
Expenses of meeting of the American Medical Association, 47
Extra-uterine fœtation, 361
Extract of meat, 303
Eye and Ear Infirmary, Massachusetts, cases treated in 1864, 188

Fassett, Dr. O. F. Death by suffocation, 279
Females, aged, indigent, fifteenth annual report of Association for Relief of, 188
Fiske Fund Prize Essay on gun-shot wounds, 49, 72, 91, 113
Fissure of rectum cured by forcible distension of anus, 207
Fœtal bones expelled from rectum, 360
Fœtal heart, sound of, heard in an unusual situation, 282
Fœtation, extra-uterine, 361
Food of man in relation to work, 513
Foot, Chinese beauty's, 186
Foreign medical intelligence, 186, 434, 474, 512
Fracture of occipital bone by a bullet, abscess of the brain, 100
Fresh air for the working class, 163

Gardner, Dr. Johnson, on sudden death in labor, 284
Gavin, Dr. M. F., on a useful disinfectant, 47
Glaucoma, 243
Glycerin and its uses, Dr. Hartshorne's work on, 452
Glycerin, properties and uses of, 240
Graduates from Harvard Medical School, 535
Green, Dr. Horace. A review of his treatise on pulmonary tuberculosis, 289, 312
Greene, Dr. J. S. Air in veins as cause of sudden death in labor, 335
Gun-shot fractures of thigh and wounds of the chest, conservative surgery, 9, 29
Gun-shot wounds, of the thorax. Is the treatment by sealing justifiable? 169; particularly those caused by newly-invented missiles, 49, 72, 91, 113

Hamilton City Hospital, 56
Hammond, Surgeon-General, petition of to the U. S. Senate, 47
Hare-lip, operation for, 454
Hare-lip pins, 185
Harris, Dr. J. C. Case of poisoning by veratrum viride, 249
Harris, Dr. Luther M., obituary notice of, 46
Hartford, births and deaths in, 108
Harvard Medical School, commencement exercises at, 144; list of graduates at, 145, 535
Harvard University, address to graduating class of, 269
Healing power of various nations, 66
Heart, rupture of septum of, 209; sound of fœtal heard in an unusual situation, 382
Hermaphrodite pig, 467
Hill, Rev. Thomas. Address to graduating class of Harvard University, 269
Hip, voluntary dislocation of, 470
Holbrook, Dr. Cases of cerebro-spinal meningitis, 369
Homans, John, Jr., Assist. Surg. U. S. A., on conservative surgery in gun-shot wounds of the thigh, 9, 29
Horse-flesh banquet, 185
Hospital at Readville, 368
Hospital, Mass. General and McLean Asylum, annual report of, 222
Hospitals, Boston, 222

Hospital, city, operations in ophthalmic department of, 278; for colored soldiers, at Nashville, 108; Hamilton City, 66; Mason General Military, closed, 188; Knight ditto., New Haven, Ct., 188; Pennsylvania, appointments at, 208
Human organs without nerves, lymphatics or capillaries, 86
Hydrocephalus, 470
Hydrophobia, human, 88

Infantile syphilis, 208
Innominata, aneurism of the, 19
Insane Hospital, Wisconsin, statistics of, 248
Insane, statistics of Butler Hospital for the, 63
Iodine, as a disinfectant, 328
Iowa Dental Society, resolution, 188
Iritis, mercurials in, 206
Iron, prevention of rust in, 266

Jackson, Dr. J. B. S. Encephaloid disease of stomach, 468; case of extra-uterine fœtation, 361; resignation of as physician to the Mass. General Hospital, 106; on rupture of septum of heart, 209; letter on his resignation at Mass. Gen. Hospital, 264
Jeffries, Dr. B. J. Translation, 497
Journals, medical, 362

Kneeland, Dr. Samuel. Case of hydrocephalus, 470
Kola-nut, caffeine in the, 266

Laboratory, U. S., at Astoria, L. I.. burnt, 188
Labor, delayed by deformity of pelvis, 437; facilitated by rupture of membranes, 336; sudden death in, 246, 284, 335
Lacerated perinæum and anus, birth of a child through, spontaneous recovery, 131
Laceration of uterus, 469
Lead, action of water on, 121
Lectures, Dr. Dean's, 228
Leucocythæmia, 20
Lexicon, Medical, by R. Dunglison, M.D., 429
Liebig's extract of meat, 303
Liebig's soup for children, 141, 148, 166, 185
Loring, Dr. E. G., on nitrate of silver and sulphate of copper in conjunctivitis, 517

Maine Medical Association, annual meeting, 515
Malformation and diseases of the ear, 247
Malignant pustule and bacteridia, 486
Man, hydrophobia in, 88
Mania, puerperal, case of, 280
Manual for army surgeons, work on, by William Grace, 429
Manual for medical officers of the U. S. Army, Dr. Charles R. Greenleaf's work on, 162
Massachusetts Dental Society, annual meeting of, 348, 432
Massachusetts Medical Society, annual meeting of, 382; note concerning, 433
Mass. Medical Society and regimental surgeons, 127
Massachusetts State Charities, 101
Materia Medica and Therapeutics, the Essentials of, work on, by A. B. Garrod, M.D., 450
Materia Medica, review of Tully's Synopsis of, 189, 211, 231, 252
Medical College, Ohio, commencement at, 208
Medical Improvement Society, reports of, 280, 360, 467
Medical Journals, 362
Medical Journal, New York, 206
Medical news, 28
Medical testimony, 250
Meetings of medical societies, 491
Mercurials in puerperal pelvic cellulitis and iritis, 206
Middlesex South District Medical Society, election of officers, 287
Military prison life, statistics of, 221
Military Surgery and Hygiene, Treatise by F. H. Hamilton, M.D., 425
Molluscum contagiosum, 357
Monstrosity, by Prof. J. B. S. Jackson, 82
Mortality, in our State Almshouses, one of its causes, 44; in puerperal pelvic cellulitis, 206; in the French army, 248; in Providence, R. I., 208
Mott, Dr. Valentine. Resolutions on death of, 346
Mourning, the nation's, 245
Munde, Dr. Charles. On Bantingism, 457
Muscle, transformed into fat, 18
Muscular rheumatism, 423

Narcein, experimental researches on, 349
Natural History Society, prizes, 364,
Necrosis of femur, case of, 129
Nervous disorders, phosphates in, 165
New York Medical Journal, 206
Nitrate of silver and sulphate of copper in conjunctivitis, 517
Nose, treatment of diseases of, 318
Notices, bibliographical, 61, 160, 243, 425, 450

Officers of Suffolk District Medical Society, 228
Ohio Medical College, commencement at, 208
Ophthalmic department of City Hospital, operations in, 278
Ophthalmic medicine and surgery, 244
Opium and its alkaloids, experimental researches on, 349
Opium in the United States, 476
Order respecting death from anæsthetics in the army, 168
Organs, human, without nerves, lymphatics or capillaries, 86
Outlines of the chief camp diseases of the United States armies during the present war, work by J. J. Woodward, M.D., 61
Ovarian extirpations, 85
Ovarian tumor, large, removed by Professor Greene, 108
Ovariotomy, case of, 197

Palmer, Dr. B. R., resolutions on death of 496
Palmer, Dr. Ezra. Vomiting of wool, 362
Palsy, scrivener's, 155, 199, 461, 502
Pamphlets received, 63, 88, 128, 208, 228
Parks, Dr. L. Treatment of acute tonsillitis by solid nitrate of silver and incisions, 283
Pathology and therapeutics of acute catarrh of the bladder, 170
Pathology, surgical, Paget's lectures on, 163
Patronage of science, 64
Pelvis, deformities of, 437
Pennsylvania Hospital, appointments at, 208
Peristaltic lozenges, 148

Pericarditis, with sudden death from valvular obstruction, 183
Peritonitis, tubercular, cases of, 329
Philanthropy during the war, 366
Phlebitis, suppurative, death, 499
Phosphates in nervous disorders, 165
Pig, hermaphrodite, 467
Placenta, retained, 477
Pleura, false membrane from, containing a large cavity, 182
Plural births, 534
Plymouth District Medical Society, annual meeting, 365
Pneumonia, pathological anatomy of, 229
Poisoning by veratrum viride, 249
Pork-eating, 25
Power, healing, of various nations, 66
Press, purification of the, 183
Prison-life, military statistics of, 221
Prisoners, starvation of, 342
Prizes offered by Boston Society of Natural History, 364
Prize offered for essay on mental and vital statistics, 208
Protracted sleep, cases of, 48
Providence Medical Association, 508
Providence, R. I., mortality of, 208
Puerperal convulsions, case of, 281
Puerperal fever, propagated by accoucheurs, 86
Puerperal inflammation of the eye-ball, early diagnosis of, 69
Puerperal mania, case of, 280
Puerperal pelvic cellulitis, mortality in, 206; mercurials in, 206
Pulmonary Tuberculosis. A review of Dr. Horace Green's treatise on, 289, 312
Purification of the press, 183

Quinine, its action, 339

Rectum, fissure of, cured by forcible distension of anus, 207
Regimental Surgeons and Mass. Medical Society, 127
Registrar's report of Boston, 471
Registration report of Rhode Island, 168
Report, annual, of Mass. General Hospital, City ditto., and McLean Asylum, 222; of Surgeon-General of Massachusetts, 83
Resignation of J. B. S. Jackson, M.D., as physician to the Mass. General Hospital, 106, 264
Retained placenta after abortion, 477
Retinitis pigmentosa, in a child of first cousins, 149
Retropharyngeal abscess, 508
Review of recent works on syphilis, 38
Reynolds, Dr. J. P. Cases of puerperal mania and convulsions, 280; muscular rheumatism, 423
Rheumatism, muscular, 423
Rhode Island, registration report of, 168
Ropes, Dr. F. C. Cases of tænia solium, 298
Roseola variolous, 281
Rupture of membranes to facilitate labor, 336
Russian epidemic, the, 262; official account of, 377; properly typhus, 497
Rust on iron, prevention of, 266

Sanitary Commission, Cincinnati branch of, 187
Sanitary condition of armor-clad ships, 87
Scarlet fever in the lower animals, 107
Science, patronage of, 64
Sawyer, Amos, M.D. On the source of trichinæ, is pork an unhealthy article of food? 17
Scrivener's palsy, 155, 199, 461, 502
Sewage, death by, 509
Shattuck, Dr. George C. Account of death of Dr. Wm. E. Coale, 374; pericarditis, with sudden death from valvular obstruction, 183; false membrane from pleura, containing a large cavity, 182
Simulation of amaurosis, 201
Sinclair, Dr. A. D. Case of phlebitis, 499
Skin diseases, Dr. Hillier's Hand-book of, 450
Skull from a Californian mound, 282
Sleep, protracted, cases of, 48
Smallpox and vaccination, 365
Smallpox epidemic, another, 142
Smallpox, in Dublin, India and Algiers, 268; in New Haven, 108
Smith, Dr. Isaac, Jr. Vaccination and smallpox, 365
Society, Medical Improvement, Boston, reports of, 280, 360, 467
Softening of the brain, case of, 21
Sound of fœtal heart, heard in an unusual situation, 282
Spontaneous laceration of the aorta, two cases of, 80
Squire, T. H., Surg. 89th N. Y. Vols. On transportation of the wounded from the field of battle, 151
Starvation of prisoners, 342
State House, ventilation of, 203
Statistics, mental and vital, prize offered for essay on, 208
Statistics of military prison life, 221
Stomach, encephaloid disease of, 468
Storer, Dr. D. H. Fœtal bones expelled from rectum, 360
Strabismus, convergent, a symptom, not a primary affection, 89
Subcutaneous injection of morphia to check vomiting, 71
Sudden death in labor, 246
Suffocation, death by, 279
Suffolk District Medical Society, officers of, 228
Sulphuric ether, long-continued use of, without fatal result, 57
Surgeon-General of Massachusetts, report of, 83
Surgery, Gross's system of, 162
Surgical pathology, Paget's lectures on, 163
Sutures, tinned wire for, 268
Swimming schools and public baths, 430
Sycosis, treatment by creasote, 327
Syme on Simpson's acupressure, 306
Syphilis, hereditary, case of, 282; infantile, 208; review of recent works on, 38

Tænia solium, case of, 298
Tape worm treated with elm bark, 132
Testimony, medical, 250
The Nation's mourning, 245
Thompson, Dr. A. W. On subcutaneous injection of morphia to check vomiting, 71
Thread, a large mass of, ejected from the stomach, 183
Three more deaths from chloroform, 123
Tilt on uterine therapeutics, 63
Tinned wire for sutures, 268
Toland Medical College, San Francisco, 187
Tonsillitis, acute, treatment by solid nitrate of silver and incisions, 283
Transformation of muscle into fat, 18

Transportation of the wounded from the field of battle, 151
Treadwell, Dr. J. B. Case of retained placenta, 477
Trichina spiralis, 167
Trichinæ, are they derived from the hog alone? 17
Triplett, Dr. W. H. Cases of tubercular peritonitis, 329; on aneurism in young people, 109
Tubular pregnancy, 508
Tubercular peritonitis, cases of, 329
Tully's Classification of Materia Medica, review of, 189, 211, 231, 252
Tumors, congenital, containing fœtal structures, 417
Typhus fever, in Scotland, 287; cases of, 509; its relation to cerebro-spinal meningitis, 480

Upham, Dr. J. B. Softening of the brain, 21
Uterus, laceration of, 469
Uterine therapeutics, 63

Variolous roseola, 281
Veal, entozoa in, 207
Venereal diseases at Vienna, 327
Ventilation of the State House, 203
Veratrum viride, case of poisoning by, 249
Vermont Medical Society, annual meeting of, 491
Vienna University, 500th jubilee of, 308
Vienna, venereal diseases at, 327
Virchow and the cellular pathology, 267
Vision, defective and impaired, 160
Vital Statistics for the week, 28 and weekly
Vomiting of mass of wool, 362
Vomiting, obstinate, checked by subcutaneous injection of morphine, 71

Walker, Dr. William J. Death and notice of, 226; resolution of Boston Society of Natural History on, 227
"Ward" U. S. General Hospital, 268
Warren, Dr. J. M. Case of necrosis of femur, 129
Warsaw, charitable bequest in, 308
Water, action of on lead, 121
Webster's (Dr. Warren) Address at the Inauguration of the Dale General Hospital, U. S. Army, Worcester, Mass., on army medical staff, 323
Wheeler, Dr. Laceration of uterus, 469
Whelan, Dr. Wm., U. S. N., death of, 433
White, Dr. J. C. Remarkable skull from a California mound, 282
Williams, Dr. Henry W. Early diagnosis of puerperal inflammation of the eyeball, 69; case of hereditary syphilis, 282; eyeball, extraordinary voluntary power over muscles of, 283
Wisconsin Insane Hospital, statistics of, 248
Wool, mass of, vomited, 362
Working class, fresh air for the, 163
Wyman, Dr. Jeffries. Transformation of muscle into fat, 18; on hermaphrodite pig, 467

Yale College, appointments in, 88
Yellow fever plot, 348
Young people, aneurism in, 109

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CASES OF GUN-SHOT FRACTURES OF THE THIGH AND WOUNDS OF THE CHEST, SHOWING THE RESULTS OF CONSERVATIVE SURGERY IN THE FORMER.

BY JOHN HOMANS, JR., M.D., ASSIST. SURGEON U.S.A., AND ACTING MEDICAL INSPECTOR OF THE MIDDLE MILITARY DIVISION.

[Read before the Boston Society for Medical Improvement, and communicated for the Boston Medical and Surgical Journal.]

DURING the early part of November last I seized an opportunity to visit Winchester and ascertain the progress and results in many cases of gun-shot wounds that I had seen only once or twice in Division hospitals, after the two battles of the 19th of September and the 19th of October. The first battle occurred near Winchester, Va., and the second near Cedar Creek, about three and a half miles from Strasburg, Va. Those wounded in the battle of Winchester, on the 19th of September, were moved into the town as rapidly as possible; the distance being about four miles from where the Division hospitals of the 19th Army Corps had been established. The battle occurred on the 19th; the troops moved forward in pursuit of the enemy at dawn on the morning of the 20th, and of course most of the ambulances moved with the column; a few were left to carry the wounded from the field hospitals to Winchester. The most appropriate buildings were chosen, to be converted as rapidly as possible into hospitals. Some of these were churches, and by removing the pews very comfortable and convenient wards were obtained; others were unfinished dwelling-houses and store-houses. On the 22d the patients had all been transferred. I then rejoined the Division to which I was attached, at Strasburg, on the night of the 20th. On the 22d the rebel position at Fisher's Hill was carried, and the wounded of the Corps, numbering about fifty, were sent back to Winchester. The army moved on at once, as fast as infantry could march, in pursuit of the disorganized and panic-stricken enemy, to Harrisonburg, and, after remaining there about a fortnight, retraced its steps to Cedar Creek. At this latter position our camps were surprised just before dawn on the morning of the 19th of October,

and our army was driven rapidly backward. Ev
in the 19th Corps was lost, and all the medical s
as the surgeons or their orderlies were carrying
All the ambulances of the 1st Division were al
three, though at night we had captured from th
we had before the battle began. Of course mo
as they fell, became prisoners. It needed but th
Sheridan (who was absent when the battle began
into a most brilliant victory. The only reinforce
this one man, who, by his personal influence, cou
of his military genius, accomplished the results
victory.

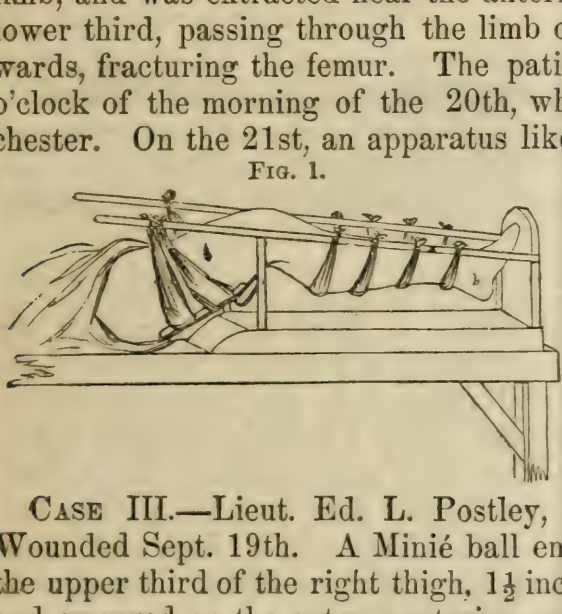
The wounded in the Corps in this battle numb
of course a number of these cases were not sent
requiring prolonged and careful treatment were
as possible, from the Division hospitals establish
miles from the battle-field, to Winchester, which
from Newtown. The weather was quite cold, the
so. The fighting had not ended till after dark
all the wounded that had fallen into the hands of
robbed of their money, blankets, and more or les
I think most of them were left behind by the reb
flight; and I mention these facts in regard to the
ther and the stripping and robbing of these crip
count for some of the necessary sufferings they ex
night following the battle was very dark, and the
in the fields and woods where they had fallen, it
to find them. Many of the men were left by
field hospitals without shelter or attendance; and
in the cold, without clothing, their wounds gro
one can easily imagine with what anxiety they wa
with what joy they greeted those who brought it.

I did not see any of these cases again till an
in November, afforded me an opportunity to visit
anxious to observe the results of conservative su
fractures of the thigh where the knee-joint was n
comminution not very extensive. My own opinio
lief that most gun-shot fractures of the fe

Case I.—Nov. 5th. Serg't John A. Brown, Co. E, 2
Vols., æt. 25 years. Wounded Sept. 19th by a Minié ball
tered the right thigh on the middle of its outer side and e
the inner side of the limb, opposite the point of entrance,
the femur; the limb has lain on its outer side; no appa
been applied; the discharge has been very free, but is d
in quantity and is not very offensive. The union is moder
passive motion of the knee is practised every day. The
is two inches. General health, appetite and appearance g
bright, and talks with a great deal of animation. The
has been nourishing and stimulating. Died December 9th

Case II.—Nov. 5th. Corporal Abram B. Stoner, Co. I,
aged 33 years. Wounded Sept. 19th by a Minié ball, whi
the right thigh at its outer posterior surface near the mid
limb, and was extracted near the anterior surface of the
lower third, passing through the limb obliquely downwar
wards, fracturing the femur. The patient lay upon the fie
o'clock of the morning of the 20th, when he was remove
chester. On the 21st, an apparatus like that represented

Fig. 1.

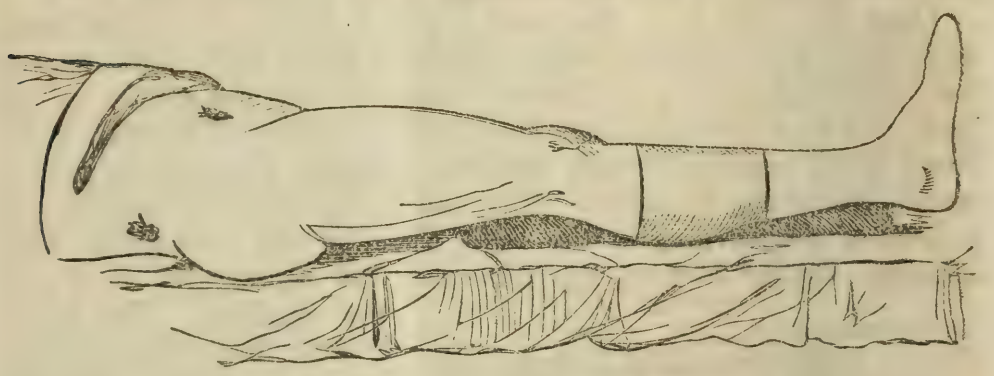


was applied. T
is now firm; the
ing is 3½ inches
charge is free, an
of laudable pus
can kick up his le
ral health, appetit
Sent north, presu
doing well.

Case III.—Lieut. Ed. L. Postley, 176th N. Y., æt.
Wounded Sept. 19th. A Minié ball entered the anterior
the upper third of the right thigh, 1½ inches below Poupart'
and emerged on the outer posterior surface of the limb,
below the greater trochanter, fracturing the femur. On
he was removed to Winchester, and lay quietly in bed for
At the end of this period slight extension was made, an
resembling that of Desault was applied. The limb was a
remain in this apparatus five weeks; during this time the
was very free, and a few small spiculæ of bone came out

ly six inches below the trochanter, and emerged from the anterior surface of the limb at a point 4½ inches nearer the knee, fracturing the femur. The bone was not extensively comminuted. Two weeks after the injury the limb was placed on a double inclined plane. No spiculæ have been removed. The discharge is at present slight; the union perfectly firm; the provisional callus is very abundant, and there is a little bowing outwards of the thigh at the point of fracture. The shortening is 2½ inches. The patient moves about the ward. Sent north, supposed to be nearly well.

Fig. 2.



Case V.—Nov. 7th. Priv. W. H. Comstock, Co. B, 114th N. Y., 19 years old. Wounded Sept. 19th. A Minié ball entered on the anterior external surface of the left thigh at about the junction of the middle and lower thirds, and still remains in the limb; the femur was fractured. Five days after the injury a Smith's anterior splint was applied. The discharge has been very copious; the wound is now nearly healed; the union is very firm and the patient can raise the limb; the shortening is three fourths of an inch and there is no deformity. General appearances, &c., excellent. Remains in Winchester, Jan. 3d, 1865. Unfit to be moved.

Case VI.—Private George W. Hall, Co. I, 38th Mass. Wounded Sept. 19th. A Minié ball entered the inner surface of the left thigh at the junction of the middle and upper thirds, fracturing the femur and remaining in the limb. No spiculæ have ever been removed. The discharge has been abundant, but is now moderate in quantity and laudable. A Smith's anterior splint was applied five days after the injury. The union is now firm and the shortening three fourths of an inch. General appearance, &c., excellent. Remains in Winchester, Jan. 3d. Unfit to be moved.

Case VII.—Serg't Hiram H. Davis, Co. B, 156th N. Y. Wounded Sept. 19th. A Minié ball entered the anterior surface of the right thigh at the middle of the upper third, and passed out exactly opposite at a point three inches below the trochanter, fracturing the femur. A Smith's anterior splint was applied five days after the injury. No spiculæ have come away; the anterior wound is now

healed; the union is moderately firm. Remains in Winchester, Jan. 3d. Unable to be moved.

Case VIII.—Private A. Ingram, Co. G, 13th Conn., æt. 33 years. Wounded Sept. 19th. A Minié ball entered at the middle of the left thigh posteriorly, and emerged anteriorly and a little externally 3½ inches above the knee-joint, passing forwards, downwards and slightly outwards, fracturing the femur. No splints have been applied; the limb has lain on its outer side, with the knee flexed; there has been very severe and continuous pain, in consequence of injury to the sciatic nerve. A very few small spiculæ of bone have come away. Suppuration has been slight. General appearance, &c., with the exception of the sciatic pain, excellent. Union is now firm; shortening, 1½ inches. The fracture was nearly transverse. Patient gets into and out of bed without assistance. Sent north, supposed to be nearly well.

Case IX.—Private Isaac Miller, Co. D, 24th Iowa. Wounded Sept. 19th, in four places—in the right thigh, right leg, right ankle and left foot. A Minié ball entered the outer side of the right thigh, 4½ inches below the trochanter, and emerged on the inner side five inches above the internal condyle, fracturing the femur at the upper part of the middle third. There was considerable comminution; a few pieces of bone have come away. No extension could be made on account of the wounds of the leg and ankle; has had erysipelas. The double inclined plane was used, and the wounds are now all doing well; the union is moderately firm, but there is some bowing outwards at the point of fracture; the shortening is 4 inches. Remains in Winchester, Jan. 3d. Unable to be moved.

Case X.—Private Albert C. Greenwood, Co. A, 14th N. H., æt. 22 years. Wounded Sept. 19th. A Minié ball entered the left thigh posteriorly a little to the inside of the median line at the middle of the thigh, and emerged anteriorly five inches above the external condyle; an oblique and slightly comminuted fracture of the femur, at the middle of the bone, was produced. He was suffering from chronic diarrhœa when wounded. Five days after the injury the limb was placed on a double inclined plane, the foot being fastened to a foot-board. The discharge is at present healthy and profuse. A very few spiculæ of bone have come out. The appetite and digestion have been poor, and are so now. The union is now firm, and the shortening 2½ inches. The bed on which the patient lies has a trap-door in the centre, which permits him to have an evacuation without disturbance. Died Dec. 24th, 1864.

Case XI.—Private W. P. Miller, Co. C, 24th Iowa, æt. 21 years. Wounded Sept. 19th. A Minié ball entered directly above the right trochanter, emerging anteriorly a little to the inside of the median line, five inches below the anterior superior spine of the ilium. The hip-joint was opened, and the synovial fluid has been escaping. The thigh has been very much swollen and the veins very prominent; has

suffered some pain from irritability of the sciatic nerve. Patient is somewhat emaciated; his appetite is fair and his general health good. The shortening is two inches, and there is supposed to be no union. The limb has lain upon its outer side, with the knee somewhat elevated. Remains in Winchester, Jan. 3d. Unfit to be moved.

Case XII.—Private George Fontaine, Co. F, 114th N. Y., æt. 25 years. Wounded on the 19th of September. A Minié ball entered on the inner side of the left thigh, at the lower part of the middle third, and passed through the limb horizontally. The femur was fractured and considerably comminuted. A long side splint was applied, and the fragments were placed as nearly as possible in proper position. The appetite and general health have been excellent. The union is now firm, and there is no deformity; the shortening is two inches and a quarter; both wounds are nearly healed. Small spiculæ have been removed during the progress of the case. The patient can raise his leg easily. Jan. 2d.—The patient has gone home well.

Case XIII.—Corporal Franklin Sackett, Co. C, 114th N. Y., æt. 19 years. Wounded Sept. 19th. A Minié ball entered the outer side of the left thigh, six inches below the trochanter, and passed inwards and slightly upwards, fracturing the femur, and was cut out at a point on the inner side of the limb a little higher up than where it had entered. There was considerable comminution, and the ball is much flattened. The discharge is now slight, both orifices are nearly healed, and the union is firm; the shortening is $2\frac{3}{4}$ inches. The patient can raise his leg, and has stood up and swung it. Sent north, supposed to be nearly well, Jan. 2d, 1865.

Case XIV.—Serg't Kirk F. Brown, Co. A, 8th Vt., æt. 22 years. Wounded Sept. 19th. A Minié ball entered the inner side of the left thigh, four and a half inches below the anterior superior spine of the ilium. It was removed from the posterior side at a point directly opposite its entrance; it is much flattened, and has embedded in it a portion of a watch-key which was in the soldier's pocket; both orifices are now nearly healed; appetite, &c., excellent. The union is firm; shortening, one and three fourths inches. Remains in Winchester. Unfit to be moved.

It will be observed that I have briefly given the history of fourteen cases of gun-shot fracture of the thigh, from the time of the reception of the wound to the middle and end of the seventh week, and that the condition of the patient nearly four months afterwards is briefly mentioned. It may be observed that in twelve of these cases the union was quite firm; in one of them there is none, and in one the hip-joint is opened. Now it would be interesting to compare the percentage of deaths following amputation of the thigh with that occurring in cases of conservative surgery of gun-shot fractures of the femur in the 19th Corps; and I confine myself to the 19th Corps

because it will be impossible for me to examine the records of all the corps hospitals. This percentage will be ascertained on a much larger scale from the records in the Surgeon-General's office, by Dr. Woodward, but the comparison in this one corps will be interesting. These fourteen cases were all that were in hospital at Winchester, alive, who had been wounded on the 19th of September, and sustained fracture of the thigh. The following twelve cases were received from the battle-field of Cedar Creek.

Case XV.—Daniel Gassel, corporal, Co. B, 176th N. Y., æt. 26 years. Wounded Oct. 19th. A Minié ball entered through the right testicle, and passed through the right thigh horizontally, emerging just below the trochanter major, fracturing the femur in its passage and producing much comminution. The limb has been very much swollen and the veins very prominent. A straight splint was at first applied on the outer side of the limb, but was soon removed on account of the increased swelling; the discharge has been profuse and somewhat offensive; no spiculæ of bone have come out; the appetite has been very good, and the patient's condition on November 7th was encouraging. The limb now lies upon pillows, placed one upon another, so as to form a double inclined plane; a weight of about three pounds is attached to the foot. There was no union Nov. 7th, and no estimation of the amount of shortening. Remains in Winchester, unfit to be moved, Jan. 3d, 1865.

Case XVI.—Gilbert Mullen, Corporal, Co. G, 90th N. Y. Wounded Oct. 19th, probably by a Minié ball. The missile entered through the upper portion of the left patella, towards its inner edge, and emerged from the popliteal space on the inner side of the inner hamstring, passing directly through the inner condyle. This was a proper case for amputation, but has been doing wonderfully well. It is now Nov. 7th, nineteen days since the injury was received; the joint is about one third larger than the right knee, and there is slight mobility. His condition has been excellent since he was wounded, and he now looks hearty. Both wounds are wholly healed, and I regard his recovery as almost certain. Sent north, supposed to be nearly well.

Case XVII.—Private A. H. Inman, Co. E, 8th Indiana, æt. 16 years. Wounded Oct. 19th. A Minié ball entered posteriorly just above the middle third of the thigh, and emerged anteriorly at a point just opposite, fracturing the femur, with much comminution; he was wounded at early dawn, and lay where he fell for twenty-four hours, being robbed of his clothing and money. His condition has not been very encouraging at any time. There is now (Nov. 7th) much swelling and considerable discharge of fœtid pus. No union; the shortening is about two and a half inches. The patient's appetite is tolerably fair, and the attending surgeon considers his general condition improving. The result is doubtful. Died, Nov. 13th, from the effects of secondary hæmorrhage.

Case XVIII.—James Mooney, Co. I, 11th Indiana, æt. 19 years. Wounded Oct. 19th. A Minié ball entered the inner surface of the thigh, at the lower third of the limb, and fractured the femur; the missile is retained. No apparatus has been applied; there is no union; the discharge is moderately large and not very offensive. The man has suffered somewhat from secondary hæmorrhage. His countenance, appetite, and general appearance are at present encouraging.

Case XIX.—Private Levi S. Eddy, Co. H, 90th N. Y., æt. 43 years. Wounded Oct. 19th. A Minié ball entered the outer side of the left thigh, at the middle third, passing out through the anterior surface of the limb, somewhat towards its inner side. The femur was fractured and comminuted; he lay where he fell for twenty-four hours, and suffered severely from the cold, having but a single blanket. No splint was applied for twelve days, when the apparatus represented in the drawing numbered 1 was applied. It is in effect a double inclined plane. There is no union (Nov. 7th); the discharge is free and laudable; general appearance excellent. Died Nov. 30th, 1864.

Case XX.—Thomas Tweedel, Co. E, 153d N. Y., æt. 26 years. Wounded Oct. 19th. A Minié ball entered the posterior surface of the left thigh, at the junction of the upper and middle thirds; the thigh was fractured and extensively comminuted; he lay on the field thirty hours. No splint was applied till Oct. 31st, when the apparatus known as Buck's was adjusted, but was soon removed on account of pain. Tetanus came on, and the patient died Nov. 9th. An autopsy, in which I removed the spinal cord and brain, revealed nothing remarkable.

[To be continued.]

DOES MAN DERIVE THE TRICHINÆ FROM THE FLESH OF THE HOG ALONE? IS PORK AN UNHEALTHY ARTICLE OF FOOD?

[Communicated for the Boston Medical and Surgical Journal.]

At this time I presume the majority of the profession would answer in the affirmative, but I think further observations will prove there are other animals equally affected. Pork furnishes a large share of the animal food of the western farmer, and it is therefore reasonable to suppose that its deleterious effects, if it possess such, should be as marked here as elsewhere, and that some of its many consumers would be affected with trichina, tænia, and the like; but such is not the case. I doubt if one practitioner in a hundred can remember an instance where he lost a patient with some mysterious disease; and if so, I will warrant he remains as much in doubt as to its nature as before the discovery of this new complaint.

The natives of the West, as a class, are unusually robust, in fact as fine a body of men, physically, as can be met with anywhere;

yet pork, in some form, graces their table three times a day the year round, and it is no unusual sight to see the younger members of a family of children, about meal time, running around the house with a piece of *raw* side-meat in their hands, devouring it with the gusto of, and acting about as civilized as so many Esquimaux. As a rule, however, they are pictures of health. Now you would naturally infer that the hogs intended for their own use would receive extra care; but it is quite the reverse. The majority of them are kept in a close, floored pen, with scarce room to turn around; and as the pen is never cleaned, the cobs, half-eaten corn, and excrements, are all mixed together. They stand, sleep and fat in filth; and could you but once inhale the noisome odor that arises from that decaying mass, I think you would fully concur with me when I say that there was the nidus of the trichinæ, if filth be necessary to generate them.

The hypothesis that the hog derives the flesh-worm from the common ground-worm, I think will prove untenable; for were it true, surely the flesh of our poultry, as well as fish, would be swarming with them; for during the spring rains the ground becomes saturated with water, and the worms, to avoid being drowned, are forced to leave their holes, and as a consequence afford food for all species of the feathered tribe, as well as fish. The Digger Indians of the Plains eat these worms, as also bugs of all kinds, including the vermin that swarm upon their persons; and yet this tribe of "red skins" are fully as agile as their white brethren.

I now wish to call your attention to another animal, the flesh of which is consumed as food, that is a thousand times more horrible to me than the hog—it is the rabbit; and my reasons for making this assertion I will state as succinctly as possible. When I commenced the study of medicine I determined to examine the abdominal viscera of every animal I killed (a practice which, I am sorry to say, is not at all popular with medical students when in the dissecting room), and rabbits being abundant, came in for a large share of attention. Imagine my astonishment at finding about one in ten affected with tænia. This discovery, as well as the statement of old hunters that rabbits were "sickly and not fit to eat in warm weather," induced me to examine them during the summer months, when, to my great disgust, I found large numbers of them had immense tumors about their necks, in all stages; some almost ready to burst, and again others in the course of formation. I opened several, which was apparently anticipating nature but a few hours, and found they contained pus, *and a most disgusting worm.* With this evidence of the unhealthy condition of the rabbit, I have fully decided that not a particle of its flesh ever makes an acquaintance with my stomach, while I retain my senses. That some rabbits are affected with tapeworm, I have not only witnessed myself, but others can substantiate what I have related; I having exhibited the animal to them, with

the worm in the bowels. In regard to the origin of this parasite, I have my own views, which I may at some future day present to the readers of your JOURNAL; that is, if you deem it worthy.

Hillsboro', Ill., Jan. 15th, 1865. AMOS SAWYER.

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

NOV. 14th.—*Transformation of Muscular Fibre into Fat.*—Dr. J. WYMAN stated that he had seen fatty degeneration occur in muscular fibre under the following circumstances. Portions of muscle were introduced into a flask with water, thoroughly boiled, supplied with air through a tube heated to redness, and then the flask was hermetically sealed. In the course of three or four weeks, on examination with the microscope, the fibres, without having become putrid, were found to have the sarcolemma entire; in some the fibrillæ were still distinct, in others they were partially replaced by granules, and in others they had wholly disappeared and the fibre-sheath was filled with globules of oil.

Dr. ELLIS had examined some of the specimens, and recognized the same appearances which are seen in ordinary cases of fatty degeneration. Rudolph Wagner found that various albuminoid substances underwent a similar change when introduced into the abdominal cavity of a living animal. It was objected to his experiments that the fat may have been secreted by the animal and substituted for the materials of the tissues introduced, these having disappeared. In the experiments here given, such an explanation is inapplicable, for, since the muscular fibre was only surrounded by water, there could be no other source for the fat than the fibre itself.

In view of these facts it seems probable, as Fourcroy originally suspected, that adipocire can be derived from muscle which has undergone transformation into fat.

DEC. 12th.—*Aneurism of the Innominata.*—Dr. ELLIS showed the specimen, which came from a patient in the Mass. Gen. Hospital, under his care.

There was considerable atheromatous disease of the inner coat of the aorta, but no dilatation. Just at the point of origin of the arteria innominata was a round opening, with smooth edges, perhaps half an inch in diameter. This formed the mouth of a large sac, four or five inches in diameter, which adhered closely to the sternum and two upper ribs, and extended backward nearly or quite to the spine, flattening the arteria innominata and vein, compressing the pneumogastric nerve, the right primary bronchus and œsophagus. The clavicle and first rib were eroded and separated from their sternal attachments, and the sternum itself was deeply eroded. The tissues filling the first intercostal space near the sternum were destroyed, so that the blood must have been in contact with the pectoral muscle, which to a limited extent was stained by it. The sac contained a large amount of

recently coagulated blood; while old, firm and partially decolorized fibrin adhered to the greater part of the under surface. The right axillary vein was obstructed by an old coagulum. The appearance of the opening of the arteria innominata was such as to indicate that the aneurism belonged to it rather than to the aorta. The latter was healthy, with the exception that the lining membrane contained a few points of atheromatous disease. The heart and lungs were normal. The bronchia contained a large amount of pus.

The patient, a man about 30 years old, entered the hospital Nov. 23d. There was flatness on percussion over a space comprised between the inner half of the right clavicle and the corresponding part of the fourth rib, and a line extending upwards and outwards from the latter point to one inch below and outside the sternal extremity of the left clavicle. A distinct though faint souffle was heard over the tumor. The patient suffered much from pain, dyspnœa and cough, and died Dec. 5th.

Dr. Oliver gave the following account of the case, which had been under his care previous to the patient's entrance into the hospital:—

He first saw him on the 3d of November. His general health had always been good; had never had any sickness worth speaking of; had never received any injury since boyhood. In his trade, that of machinist, he had been employed on light work; and he could not remember that he had lately strained himself, either at work or otherwise. Some time in July, he began to experience pain and uneasiness in front of chest, right shoulder, and right side of neck; and in the latter part of September these symptoms became severe. It was not, however, until the 29th of October that he gave up work entirely. At this date he experienced some shortness of breath, and disagreeable sensations after swallowing food. For some days previously alteration in the voice was noticed. The tumor was first noticed Oct. 31st.

On Nov. 3d, above mentioned, the patient was able to be about, and he walked up hill to Dr. O.'s office without much difficulty. He was a little pale, but had not, evidently, lost much flesh. After resting a few minutes the pulse was 95. The chief complaint was severe pain, darting from back of right ear through right shoulder to front of chest, preventing him from sleeping at night. The pain was pretty constant, and was increased by taking food. He was unable to lie upon the back, the pain and shortness of breath being greatly increased by any attempt to take this position. The other symptoms mentioned were, occasional cough, with frothy expectoration, and hoarseness; neither of these latter symptoms were present at the first examination. Coughing produced great pain.

On examination, a round tumor was seen just bulging out in the angle formed by the edge of the sternum and clavicle, on the right side. The cartilage of the second rib could not be felt. Pressure upon the tumor produced considerable pain. Pulsation, synchronous with the beat of the heart, could be felt by the hand, but could not be noticed by the eye from in front; by taking a side glance view, however, the pulsation, though slight, was quite distinct.

On auscultation, no murmur was heard, either over the tumor or over any part of the cardiac space. Both sounds of the heart were heard very distinctly over the tumor, but had a heavier, duller charac-

ter than when heard over the heart itself. Upon auscultation of the chest posteriorly, no marked symptom was noticed. As above stated, the pulse was 95; at the left wrist it was of normal strength; at the right wrist the force was decidedly less than at the left; the same difference in force was noticed in the carotids of the two sides. There was no swelling of the right arm, and no difference was noticed in the pupils.

The diagnosis was, aneurism of the aorta, implicating in some way the arteria innominata, and pressing upon some part of the air-passages and œsophagus, and upon the recurrent laryngeal nerve.

By the middle of November the patient had become decidedly worse. The nights were very distressing. The head could not be turned to either side without a good deal of pain. The hoarseness was almost constant, and the cough was accompanied by the expectoration of semi-purulent matter. On examination at this time, the tumor was larger, and was pulsating perceptibly. There was still no murmur. The pulse at the right wrist was more feeble than before. On examination of the lungs posteriorly, the respiration was decidedly more feeble on the right side, and sonorous and mucous rales were abundant. These were not heard, or only distantly, on the left side. The tumor was therefore pressing upon the right bronchus.

Soon after this examination, the patient was advised to enter the Mass. Gen. Hospital, where he came under Dr. Ellis's care.

Dec. 26th.—*Leucocythæmia.*—Dr. Cheever, alluding to a case in which he operated some months ago, remarked:—"As this disease is not only somewhat new, pathologically, but, in a clinical and surgical point of view, unknown, it is of importance that every new fact regarding it should be made public, and preserved. I desire, therefore, to place it upon record that the disease re-appeared in the boy from whom I removed a large glandular tumor of the neck, in April, 1863. This tumor, under the microscope, presented the exact cellular structure which is figured in Virchow's *Cellular Pathology* (page 208, Am. Ed.) as typical of lymphatic glands. No other cellular elements were discovered in it, except connective fibrous tissue.

"Eight months after the operation, the tumor began to return, near the clavicle of the same side; and has now, in one year longer, attained two thirds its magnitude when removed. Other glands, lower down in the neck than those operated on, have enlarged, and are now putting on the same appearance as the former ones. Meanwhile the child's health, which had much improved, has again deteriorated, and it seems doubtful whether he would survive another severe operation, even if the friends consented.

"The first tumor was removed in the hope that it would not recur, and that the leucocythæmic diathesis might be relieved by its removal, and by after treatment. This hope having proved fallacious, it now becomes us to inquire—

"1st. Whether any more reason exists for removing leucocythæmic glandular tumors than for removing cancer.

"2d. Whether they are to be classed as of equal malignancy with recurrent, fibrous or epithelial growths, or hold an intermediate position between the three.

"If glandular tumors are operable cases, they should be removed early, before adhesions, to which they are very prone, have formed.

What are the chances of their recurrence, and what the influence of their removal on the leucocythæmic diathesis, time and observation must determine."

JAN. 9th, 1865.—*Case of Softening af the Brain.*—Dr. UPHAM reported the case. The patient, a captain in the 1st Mass. Cavalry, 26 years old, entered the City Hospital Sept. 23d, 1864.

While in the field with his regiment, at Spottsylvania, he received a slight sun stroke, not sufficiently severe, however, to keep him from duty. Shortly after this he had a fall from his horse, but received little injury. Previous to this, in the Wilderness, he was much exposed on picket, and slept for three nights on the snow, protected only by a covering of hemlock boughs. Worn out and prostrated, he was sent to the field hospital, from there, early in June, to Annapolis, and thence to Georgetown Seminary Hospital, where he remained till July, and then came to Boston on furlough. During this time the principal difficulty seems to have been obstinate constipation, together with some affection of the eyes, for treatment of which he came under the care of Dr. H. Derby. Contrary to advice, he was not sufficiently careful, wearing a short cavalry jacket about the street, and not properly guarding against exposure.

He had been gradually losing his sight, and had been subject to severe pain in the head, neuralgic in character, darting through the temples and about the frontal and orbital regions. At time of entrance he was suffering from this pain, and required the constant use of narcotics. There was also hemiplegia of the left side, pretty well marked; pulse 60, feeble and soft; tongue nearly clean; sleep natural; bowels costive.

Sept. 28th, he reported a feeling of fulness in the head, with a heavy, throbbing pain. His ideas were confused; he was slow to answer questions; could keep no account of time, and was worried by any effort on his own part to trace it.

Dec. 7th.—At 8 o'clock, he seemed very restless, the right hand was moved about and over the face, with some convulsive action of the fingers. This increased till the right arm was in constant and rapid motion. Countenance moderately suffused; right eye entirely closed; left arm rigid, with the hand firmly flexed; pulse rapid and feeble; some frothing at the mouth; perfect unconsciousness. This state lasted till 2, P.M. At 2.30, there were some signs of a return of the paroxysm. Ice water was applied to the head and sinapisms to the feet. A little later the patient sank into a quiet sleep.

24th.—No return of paroxysms since last record.

Jan. 4th.—This morning an attack of epileptiform convulsions, repeated six times during the day, and twice at night.

6th.—Pulse grew weaker, and this morning registered 150; breathing labored; features pinched and a little inclined to lividity; right eye closed; left, partially open, and but slightly influenced by light. Entire hemiplegia of left side. Skin below the normal warmth.—These symptoms continued through the day; the patient was not at all conscious, and died at 7.30, P.M.

The treatment consisted in the administration of "chlorodyne" until rejected by the stomach. This was followed by the hypodermic injection of acetate of morphia. The bromide of potassium was given after Dec. 7th.

The *autopsy* was made by Dr. Charles W. Swan, who furnished the following report :—

Autopsy, Jan. 7th, fifteen hours after death. On removing the calvaria the sinuses seemed more than ordinarily distended, and the superficial veins were very distinct. General appearance, that of an unusually fine, healthy brain. Weight, 56 ounces.

Softening and reddish-gray discoloration were first observed over a small space in the right *crus cerebri,* just anterior to the *pons varolii.* This the finger readily followed, without apparent tearing of the brain tissue, anteriorly into the white substance of the right hemisphere, to the distance of two or three inches; and on this side the optic thalamus and corpus striatum were so much involved in the morbid process as to be scarcely traceable. The most softened portions—which were contained within the radius of the little finger from the point of entrance—were pulpy, but not fluid; and irregularly grayish, reddish or dull white, limited portions being also gelatinous and somewhat translucent. Surrounding this the section was not discolored, but presented a roughish, mottled, curdy appearance, becoming firmer as it gradually passed into the healthy white brain-substance beyond.

Under the microscope, the principal, and quite uniform appearances were broken-down, curved and distorted nerve fibres, together with abundance of free fat-granules, distinct and agglomerated, rarely inclosed in cell-walls. No pus- nor pyoid-cells seen.

Dr. H. Derby, under whose care the patient had also been, gave the following report of his case :—

"The patient consulted me Aug. 4th, 1864. Previous to his entering the service his health was excellent, and he attributes his present troubles entirely to exposure in the field. Complains of almost constant headache on right side. Is feeble—moves slowly and with uncertainty. The mind is in general quite clear; at times, however, he is the subject of marked hallucinations, imagining the presence of people in the room, and by his side in the street. He is unable to reason as rapidly as usual. Within a short time has noticed some failure of vision; does not see distant objects distinctly, and in reading, although he makes out the individual letters, is unable to 'join' them.

"General appearance of each eye normal, the right pupil being, however, a trifle smaller than the left. The amount of vision in each was represented by the fraction $\frac{2}{5}$ (unity being the normal standard). The ophthalmoscope revealed extensive changes. The retina in the vicinity of each optic entrance had lost its normal transparency, and presented the appearances usually found in inflammatory affections of this structure, viz., grayish opacity of the retinal substance extending from the edge of the optic entrance along the principal vessels, and at times obscuring them. Numerous retinal ecchymoses were scattered about the region of the optic entrance, growing less frequent in the vicinity of the macula lutea.

"Few diseases of the eye are more uncommon than idiopathic affections of the retina, and in the present case the other symptoms pointed conclusively to the central character of the affection. Beyond the use, therefore, of shaded glasses, no local treatment was at first deemed desirable. The patient was at this time residing out of the city, and could not be induced to appreciate the serious nature of the case, or

the necessity of strictly following the directions of his medical adviser, both regarding his habits of life and the treatment of the disease. I saw him but three times between the date of his first coming to me and Sept. 7th, when he came up to the city and placed himself entirely in my hands. In the interval it seemed to him that his vision had slightly improved, as well as the headache on the right side, but there was a good deal of pain in the back of the head, and he complained of slight deafness and loss of sensibility to touch.

"Sept. 7th.—One and a half ounces of blood were taken from the left temple by means of the artificial leech, the eyes being afterwards kept bandaged for twenty-four hours.

"13th.—Has had most agonizing attacks of headache of late. Is now suffering intensely, the pain appearing to come on in paroxysms, and eliciting loud groans. The memory seems a little affected. Complains of frequent twitchings of the lower limbs. No dejection for four days.

"A subcutaneous injection of morph. acet., gr. $\frac{2}{3}$, was made, with instant relief to the headache. He slept quietly for several hours, when he was wakened by accident. The headache returned, and continued through the night.

"14th.—Slept a little the past night. Was at times slightly delirious. Mind now clear. Very severe headache still continues. No dejection for five days. Saw the patient in consultation with Dr. Ellis, who advised sinapisms to back of neck. ℞. Ext. colocynth comp., gr. xv.

"15th.—Slept a few hours. Full dejection. Still great pain in head. Is calm and rational, pulse (as yesterday) 76. Skin cool. Has obtained some relief from headache from the ammoniated tincture of valerian, which is given in doses of two drachms as occasion requires.

"16th.—Pain in right side of head is even worse, occurring in paroxysms, and extorting groans of agony. Pulse 60. Skin cool. No return of delirium. Saw patient again with Dr. Ellis, by whose advice a blister was applied to back of neck and dressed with savin cerate.

"8, P.M.—No relief. Subcutaneous injection of morph. acet., gr. $\frac{2}{3}$, was made in right temple.

"17th.—Slept well the first part of night, frequent paroxysms towards morning. Now (8.30 A.M.), skin cool, pulse 72. Is entirely rational. Appetite quite good. ℞. Chlorodyne (Dr. J. C. Browne's), gtt. lx. every four hours.

"8.30, P.M.—Has slept comfortably during day, having taken four doses of the chlorodyne. Still occasional attacks of the same agonizing pain in right side of head.

"Sept. 19th.—Weaker. Skin moist; pulse 60. Paroxysms of pain continue, some being very severe. Manifest diminution in the control over left arm and leg. Mind wanders a little at times. Continued costiveness, refusing to yield to enemata, and overcome by doses of ext. colocynth comp.

"21st.—Fewer paroxysms, but more steady headache. Some twitching of left arm and leg.

"On the 22d, the patient was removed to the City Hospital, and my professional relations with him terminated. I continued, however, to see him from time to time, up to his death.

"The relief he at first obtained from the chlorodyne was very great, though only temporary. It lessened the frequency of the paroxysms, and procured him sleep, when every thing else (except the subcutaneous injection of morph. acet. which in the outset I was unwilling to use too frequently) had failed.

"Vision steadily diminished from the first.

"Nov. 6th.—I satisfied myself that there was no perception of light in any portion of the field of vision.

"Dec. 6th.—Partial paralysis of the third pair on the right side was observed; the upper lid drooping markedly, and the eye diverging. 18th, when the general amelioration in his condition took place, the retina of the left eye regained sufficient sensitiveness to light for him to point out the position of the window."

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, FEBRUARY 2, 1865.

The American Medical Association.—In a few months the meeting of our national society will be held in this city, and we desire at this early season to call the attention of all whom it may concern to the importance of those preparatory labors upon which the question of its success wholly depends. The objects for which the Association was founded need not be considered at the present time, for they are recognized not only here but in all the civilized countries of Europe, and everywhere is the cultivation of science and social sympathy promoted by similar means. There is occasion, however, we feel, to examine the manner in which it has been conducted, and its results. It has never been our fortune to attend a meeting of the Association, and we have formed our opinions accordingly from its published proceedings, in the same way as we have formed our opinions of similar bodies in other countries. Judging our own, therefore, by a comparison which is unavoidable, we cannot but feel that it accomplishes in a slight measure only the high purposes for which it was designed. It is not to be expected that in a country so vast as ours, where centralization of talent and universal recognition of merit are impossible, there should be that entire fitness in the selection of committees and the management of its machinery, as in the British Association, for instance, but we can certainly do much better than we have done. Reports and papers should not be allowed to be published which are a disgrace to our profession, if they are to be judged by the position they hold, as representing the present state of our medical knowledge. Neither should important measures be dragged before an assembly entirely incompetent and unprepared for their decision, and passed without a moment's reflection. These are some of the errors which have helped to create a feeling of indifference, almost, on the part of many of the best and oldest physicians in the country towards an institution which they were so zealous to found, and the decay of which none would more regret. That there is need of reform we are all aware, and that it is possible, even easy of attainment, we truly believe.

Two measures should be insisted upon, which, if faithfully observed, would, we are convinced, in a year at farthest do much to restore the Association to the rank and respect it should occupy. The first and chief of these is a more careful selection, and a diminution in the number of delegates sent. Improper representation has been the bane of our popular system of national legislation, and to this same cause must be laid, we fear, most of the shortcomings in the conduct of our Association. We should say that the number usually chosen should be reduced at least two thirds, and that the selection should be most carefully made by a committee appointed for this purpose by the various bodies represented. Such a reduction would not diminish the attendance upon or interest in the meetings, for admission and the voluntary presentation of papers is of course open to all. This is the work now before the hundreds of district medical societies throughout the country, and we trust that they will approach it with a proper sense of the consequences of their acts. Let us once secure an honorable and eminent representation from all parts of the land, and the election of a fit board of officers and the appointment of the most thoroughly-educated and competent men in the various committees or sections follow as matters of course. Guzzling and sight-seeing will then be kept in their subordinate place, and delegates will not return home, to tell of the number of entertainments they have enjoyed and of their entire ignorance of everything which has occurred in council. The other measure is not of so much importance at this time, inasmuch as it must come before the Association itself to be acted upon. It is, however, one of vital interest. We refer to the delay which prevails in the preparation of the reports from year to year. No gentleman should accept such a task unless he is willing and able to accomplish it, and it should be understood that nothing but illness should be allowed as an excuse for his failure to do so.

We trust that the coming meeting in Boston will be the beginning of a new era in the history of the Association. We have received a letter from the Permanent Secretary during the past week, in which he says, "that determined efforts are being made to have a full representation from the Key-stone State," and that "there is every reason to believe that very able reports will be submitted by most of the committees." There is a growing hope, too, that this annual meeting will be attended by many of our former members, who will be gladly welcomed by their old friends in this city, and it may even be that the bright days of June are coming to us glorious with returning Peace.

Pork-eating.—Our correspondent from Illinois, in his communication, which will be found in the first part of the present number, asks two questions in relation to this subject, which he intended, no doubt, to answer. He has, however, not done so. His observations show, perhaps, that western pork is not as a rule measly, and that rabbits are infected by an intestinal tænia and with some nematoid worm. The tapeworm referred to, however, is not Tænia solium, but T. pectinata, and is never found in man, nor is tapeworm in man ever produced by eating the tapeworm of another host. It is the encysted stage of the animal which is converted into the mature worm within the intestinal canal of the individual which devours it, and such a

cysticercus is found in the tissues of the rabbit. It becomes, however, in the course of its development Tænia serrata of the dog, never T. solium. The "disgusting worm" found in the tissues of the former animal certainly was not Trichina spiralis, and therefore could never cause trichiniasis in man, nor is it probable that the flesh of the rabbit could produce within the human body any affection of this nature. We see no reason, then. for changing our opinion, that the hog is the only animal at present known to be the cause of this disease, or that its flesh is an unsafe article of food.

Corpulence and Leanness.—Some sneers have been levelled at Mr. Banting for his repudiation of sugar, but it is generally known in the medical profession that the most eminent professors of medicine and surgery have, for the last sixty years or more, counselled the sparing use, or the total abstinence from sugar, to patients of plethoric habits and gouty diathesis. So long back as 1804, Sir Everard Home and Drs. Baillie and Warren advised a sparing use of sugar to gouty patients; and the late Sir Benjamin Brodie, Home's pupil, and the late Drs. Chambers and Bright, advised its discontinuance in cases of obesity. The same views have long prevailed in Paris. Dr. Brichetenau, speaking of sugar, says:—"La diète sucrée est fortifiante: elle communique à l'économie animale beaucoup de force et de vigueur et *est une cause d'embonpoint* et de fraicheur qui sont dus à la surabondance des sucs nourriciers. En revanche, il faut interdire le sucre *aux personnes pléthoriques*, aux constitutions vigoreuses disposées aux inflammations et aux hémorrhagies." Nevertheless, there is no country in which there is a larger consumption of sugar among the well-to-do classes than in France. Three, four, and sometimes five lumps of beetroot sugar are often taken three times a day by Frenchmen of the middle classes with coffee, besides an additional portion dissolved in water as *eau sucrée*. Yet a stout Frenchman is the exception and not the rule. The truth is that Frenchmen, as a general rule, are more in the open air than Englishmen, and their solid meals are also fewer, consisting merely of a *dejéuner à la fourchette* and dinner. Their food, also, though more relishing and more scientifically cooked than the food of Englishmen, is less nutritive and less calculated to produce plumpness, not to say obesity. Frenchmen, for the most part, drink *l'eau rougie*, which may be described as a table- or a couple of tablespoonfuls of ordinary wine mixed with a tumbler of water, or a mixture composed of half wine and half water. Little beer and no stout are drunk in France, unless by foreigners; it may be therefore predicated that the fattening effect of sugar is less in that country on the natives than in England. But that the effect of sugar, unless counteracted by particular circumstances, is calculated to promote plumpness and *embonpoint*, all scientific French chemists are agreed. One of the most agreeable and instructive writers who has discoursed on food and dinners is the late Brillat Savarin, a translation of whose work, "Physiologie du Goût," by Mr. L. F. Simpson, is now before us. The author was a man of large experience, of refined taste, and much travel. It is now more than forty years since the first edition of the "Physiologie" appeared, and there may be found in it all and a great deal more than appears in the pamphlet of Mr. Banting. Savarin, like Mr.

Banting, looked on his stomach as a most formidable enemy. "I conquered it," says he, "and reduced it to its proper dimensions." He sets out, in his chapter on obesity or corpulence, with the principle that carnivorous animals never are fat. "Look," he says, "at wolves, jackals, birds of prey, &c." He might also have added, "Look at tigers, lions, foxes, foxhounds, cats, &c." Herbivorous animals, he alleges, do not grow fat unless they live to an old age; "but," he adds, "if you feed them with potatoes and farinaceous substances they fatten in a very short time." This is really the principle put forth, more than forty years afterwards, by Mr. Banting. "The items from which I was advised to abstain," says he, "were bread, butter, milk, sugar, beer, and potatoes—all these contain starch and saccharine matter, tending to create fat." This is only true partially, or *sub modo*. Farinaceous substances, mixed with animal food, and largely taken, no doubt generally produce obesity or stoutness, as it is generally called. But farinaceous food, being the solidest or the principal basis of diet, rarely or never produces corpulency. The Irishman, the Highlander and the North Welshman eat from 8 to 12 pounds of potatoes per diem, with skim-milk and butter-milk occasionally to wash the solid matter down, and use a salt herring to give point and piquancy to the unsavory meal; but, in the West or South of Ireland, in North Wales, or in the Highlands or Shetland Isles, you rarely or never meet a fat Celt; so that it is not true that farinaceous food or saccharine matter, taken wholly or as the principal ingredients of food, produce corpulency. The natives of India, amounting to many millions of men, live on rice and ghee, which is melted butter, both foods combining starch and saccharine matter; yet, among millions of these, you never see a corpulent ryot. It is not therefore true that a purely starch and saccharine diet invariably produce stoutness. A starch and saccharine diet, combined with a flesh and fish diet, has the effect of producing stoutness in certain constitutions; but, in such cases, there is generally a predisposition to obesity, or the individual who grows corpulent becomes so from insufficient exercise or too much sleep, or from both causes combined.

The question of Bantingism is well and philosophically treated by Dr. Edward Smith in his inaugural lecture delivered before the Physiological Sub-section of the British Association at Bath. He says:—

"I am not here concerned with the medical question, as to whether it is desirable to reduce the bulk of a given individual—a circumstance which must always be left to the judgment of the medical man in charge of the case; but I feel compelled to state that it would be an evil to this nation, both physically and mentally, if the system of reduction were to become at all general, and that, on the contrary, regarding the whole population, we need to add to, rather than take from, the weight of the body. I would also add my experience as a physician that, even in the well-fed classes, I have seen very serious diminution of both bodily and mental vigor follow the working out of the plan."

It has been well known for more than eighty years, as Dr. Smith states, that, in a full-fed and fat man, the fat and fluids of the body may be lessened and the whole bulk and weight proportionately reduced by this system on principles well established. The plan is to reduce the carbon or fat-forming elements. But this should be done very gradually. There should not be, as Dr. Smith properly says, the

absolute excision of fat and sugar and the extreme reduction in the quantity of bread, or the great increase in the quantity of meat. The bulk of the body may be reduced by lessening the amount of food; and, as the reduction is more slowly effected, the process is attended by less danger to health. Thus, as Dr. Smith suggests, the prevalence of heart diseases, derangement of digestion, and gout, will be prevented. Instead, therefore, of wholly abandoning bread, butter, milk, sugar, beer, common sense would suggest that these articles of diet should be gradually lessened day by day and week by week till they can be greatly and safely lessened or altogether dispensed with.

Mr. Banting contends that the "great moving cause of fatty corpulence" (to use his own phrase) is saccharine and farinaceous matter. But this is only true conditionally and *sub modo*. Men fed wholly on farinaceous and saccharine matter do not become obese or even fleshy. There is scarcely a peasant in the South or West of Ireland that does not consume from 9 to 10 pounds of potatoes daily; yet the average weight of the Irish peasant is about 130 pounds, being 22 pounds less than Mr. Banting on the reduced scale. It is quite true that the negro and the mule in our West India Islands increase in fat when the young sugar-cane comes in; but a corpulent negro or mule is a most exceptional animal; and it should be observed that neither the mule nor the negro was, in the days of West India slavery, when the islands were in their palmiest state, fed alone on sugar-cane.—*London Reader.*

Prof. S. G. Armor, of Ann Arbor (Mich.) Medical College, has in preparation a small work to be known as the *Essentials of Materia Medica*.—Dr. Charles Pope, the well-known surgeon of St. Louis, having arranged to go to Europe on a professional and pleasure trip, his friends recently took occasion to compliment him with a banquet.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, January 28th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	35	43	78
Ave. mortality of corresponding weeks for ten years, 1853—1863,	39.0	34.5	73.5
Average corrected to increased population - - - - -	00	00	80.37
Death of persons above 90 - - - - - - - -	0	0	0

Married,—At Wrentham, 18th ult., Dr. Nathaniel W. Hawes, of Boston, to Miss Caroline C. Fisher, of W.—In Bath, Me., 4th inst., Chas. Hutchinson, M.D., of Gray, Me., to Mrs. M. J. Hatch, of Bath.

Died,—At Albany, N. Y., Jan. 21, Dr. Mason F. Cogswell, son of the late Dr. Cogswell, of Hartford, Ct.—Killed at the storming of Fort Fisher, 15th ult., Dr. William Longshaw, Assistant Surgeon U.S.N., formerly of East Cambridge.

Deaths in Boston for the week ending Saturday noon, Jan. 28th, 78. Males, 35—Females, 43.—Abscess, 1—accident, 4—apoplexy, 1—disease of the bowels, 1—congestion of the brain, 1—disease of the brain, 2—bronchitis, 2—burns, 1—cancer, 2—bilious colic, 1—consumption, 14—convulsions, 3—croup, 1—debility, 1—diarrhœa, 3—diphtheria, 1—dropsy, 2—erysipelas, 1—scarlet fever, 1—typhoid fever, 2—disease of the heart, 1—infantile disease, 4—intemperance, 1—congestion of the lungs, 2—disease of the lungs, 1—inflammation of the lungs, 3—measles, 1—old age, 4—paralysis, 2—puerperal disease, 1—smallpox, 5—suicide, 1—syphilis, 1—unknown, 5—whooping cough, 1.

Under 5 years of age, 25—between 5 and 20 years, 8—between 20 and 40 years, 18—between 40 and 60 years, 16—above 60 years, 11. Born in the United States, 52—Ireland, 24—other places, 2.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. LXXII. THURSDAY, FEBRUARY 9, 1865. No. 2.

DR. HOMANS'S CASES OF GUN-SHOT FRACTURES OF THE THIGH AND WOUNDS OF THE CHEST.

[Concluded from page 16.]

CASE XXI.—Lieut. L. G. Draper, Co. I, 75th N. Y. Wounded Oct. 19th. Minié ball entered posterior inner surface of the left thigh, at the junction of the middle and lower thirds, fractured the femur, and is retained. No apparatus has been applied, and the limb is much swollen. Discharge free and offensive; has had irritative fever and diarrhœa; his condition is now (Nov. 7th) improving. On the 11th of November the apparatus shown in Fig. 1 (see last week's issue, p. 11) was adjusted. No union as yet. Remains in Winchester, Jan. 3d. Unfit to be moved.

CASE XXII.—Corporal David B. Barnard, Co. C, 30th Mass. Wounded Oct. 19th. Minié ball entered the anterior surface of the thigh, at the junction of the upper and middle thirds, and passed out at a point horizontally opposite on the posterior surface, fracturing the femur, and causing considerable comminution. The discharge has been very copious, but not very offensive. A Smith's anterior splint is at present (Nov. 7th) applied. General appearance fair; expresses himself as feeling quite comfortable. Remains in Winchester, Jan. 3d, 1865.

CASE XXIII.—Private S. P. Brown, Co. I, 6th N. Y. Heavy Artillery. Wounded Oct. 19th. A Minié ball entered the outer side of the thigh, at the junction of the middle and upper thirds, and emerged anteriorly towards the inner side, fracturing the femur. The limb was placed on a double inclined plane, and the discharge has been free and is at present (Nov. 8th) laudable. There is no union; the shortening is two inches. General appearance, &c., good. Died Dec. 3d, 1864.

CASE XXIV.—Corp. Wm. Franks, Co. C, 24th Iowa, æt. 25 years. Wounded Oct. 19th. Was a very large, strong man, in good health. A Minié ball entered right nates, externally to the

tuberosity of the ischium, and passed forwards and inwards. Its locality could not be ascertained. No splint was applied; there was very little swelling, but much pain was experienced—referred to the hip-joint. The right limb lay across the other when in bed, and was put there voluntarily, as if the femur were uninjured. He occasionally crawled about on his hands and knees, and several times stoop up, apparently bearing some weight on his right leg. On the 3d of November he died, having gradually failed from the time of the injury; there was no eversion and no shortening noticed. At an autopsy, the acetabulum was found to be fractured, and the head and neck of the femur also. The bullet was found, considerably distorted, lying between the sheath of the femoral vessels and the bone. The neighboring portions of the pelvis and the upper third of the femur were denuded of periosteum, and fœtid pus had gravitated downwards among the muscular tissues in the neighborhood of the joint.

Case XXV.—Private Rial Thompson, Co. H, 114th N. Y., æt. 26 years. Wounded Oct. 19th. A Minié ball entered on inner posterior surface of left thigh, near popliteal space, and remained in limb. There is some shortening; the femur is, in my opinion, fractured into the joint, and should have been amputated. He died Nov. 20th, 1864, and the femur was found to be fractured into the knee-joint between the condyles.

Case XXVI.—Private Robert E. Gitman, Co. F, 114th N. Y. Wounded Oct. 19th. A Minié ball entered the symphysis pubis, passed horizontally through the ramus of the bone, and emerged from the posterior external portion of the thigh, four inches below the trochanter, fracturing the femur in the neighborhood of the neck of the bone. He was stripped and robbed by the enemy, and lay upon the field fourteen hours. He lost much blood by hæmorrhage from the pubic wound, and died on the 30th of October, having had many attacks of secondary hæmorrhage.

We have here briefly recorded twenty-six cases of gun-shot fracture of the thigh; these notes were made during the first week of November, and the records of the hospital were examined on the 3d of January, 1865, to ascertain the condition of the patients at that date. There are recorded in the 19th Corps Hospital, at Winchester, 28 cases of fracture of the thigh where conservative surgery was necessarily or intentionally practised; of these, 9 remain unfit to be moved, except in case of necessity; 9 have died; and the remaining 10 have been sent north, nearly well. There are recorded 18 cases of amputation of the thigh (of course many other cases were sent on at once from the field to Frederick, Martinsburg and Baltimore); of these, 10 have died and 8 recovered.

Now, what is the ultimate result in these cases where nature attempts to restore the fractured limb? In the first place, it will be observed that in nearly all the cases where union takes place, no

pieces of bone have come away, or else a very few spiculæ have been removed; the result is that, in very many cases, a large number of fragments of bone, entirely destitute of vitality, are shut up within a vast amount of callus, and in many cases, sooner or later, the wound opens afresh from the irritation caused by these disorganized fragments; the patient sinks from the exhausting suppuration of necrosis, or a surgical operation, necessary to afford a chance of recovery, turns the balance against him. I have seen attempts to form bony union, and masses of callus thrown out from as many as a dozen different fragments of a broken femur, showing how hard nature was trying to repair the mischief; and I presume that in many of the cases here mentioned, a greater or lesser number of useless unnourished fragments are encased within the uniting callus. The most favorable case for treatment, and the most favorable result that I have ever known in any case coming under my own supervision, was that of a Captain of the 53d Mass. Vols., who was wounded during one of the assaults on Port Hudson. His left femur was fractured transversely, at the junction of the upper and middle thirds, by a round bullet. He went home from New Orleans with a thigh firmly united, and with but three fourths of an inch shortening; there was no deformity. I learned that he was afterwards able to walk, and supposed him to be as well as ever. What was my surprise to hear, a day or two since, that about seventeen months after the wound had been received, and fourteen after I considered him well, his wound opened afresh, an attack of necrosis came on, and he died. The original fracture was not comminuted, the bone was broken nearly transversely, and the case was as favorable a one as could be found, if we were searching for a case on which to predict a favorable result.

In the second place, it will be noticed that death occurs not unfrequently from secondary hæmorrhage. Pyæmia is more commonly the cause of death in cases like those which have just been briefly described, than in cases of amputation, while sloughing and extensive gangrene is more common in the latter.

The difficulty with the statistics of military surgery is, that the observations do not extend over a sufficiently long period of time. Cases are under the treatment of surgeons in military hospitals for a period varying from a few weeks to a few months, and are then lost sight of; the men often promise to write, but rarely do so. If these cases were retained in service, and ordered to report once a month to the surgeon who last had them in charge, the information collected would be of incalculable value in the practice of military surgery. Suppose that in every case in which union had occurred after gun-shot fracture of the thigh, a furlough for a year had been granted and the men ordered to report by letter once a month to the Surgeon-General's office, an amount of information for our future guidance, of vast magnitude and value, would have been collected, well worth the monthly wages of the men. It seems improper to

compare the results of amputation and conservative surgery in the few cases above mentioned, with any view to the laying down of rules; I merely consider the cases particularly interesting.

Penetrating and Perforating Wounds of the Chest.

Case I.—Serg't Samuel Ensminger, Co. H, 11th Indiana, æt. 21 years. Wounded Oct. 19th. A Minié ball entered the right posterior lumbar region, near the fourth lumbar vertebra, and was removed from beneath the skin just over the junction of the eighth rib with its cartilage. The patient was wounded in the morning, and walked about a mile; he was brought to Winchester the same night. After being wounded he suffered intense pain in the right chest; countenance anxious; breathing short and catching. He had some cough, and expectorated some bright blood; has had very little cough since, and the difficulty in respiration has nearly subsided. Suppuration is now free, and the discharge is not offensive. The resonance is diminished throughout the right chest, and the respiration also; respiration puerile in left chest. Appetite and general appearance excellent. Sent north, supposed to have recovered.

Case II.—Private George P. Randall, Co. E, 30th Mass., æt. 25 years. Wounded Oct. 19th. A Minié ball entered left chest, between third and fourth ribs, about an inch externally to nipple, and emerged through the middle of the costa of the left scapula, two inches below the spine of the scapula. He spit blood soon after being wounded. His cough has continued to this time (Nov. 8th), but is steadily decreasing in severity. The bloody sputa ceased two days after injury; now, the expectoration is slight and frothy. At first he was obliged to sit upright to breathe, and respiration was very difficult for six days; now, respiration is comfortably performed. Both openings now discharge laudable pus. The resonance is good in both chests; the respiration is diminished in left chest. Appetite and general appearance fine. Walks about ward. Died Dec. 8th, 1864.

Case III.—Corporal Myron P. Warren, Co. B, 8th Vt., æt. 21 years. Wounded Oct. 19th. A Minié ball entered right chest, between second and third ribs, about two inches from sternum, and passed out through the scapula two inches below the spine of the scapula. At the time of the injury he spit blood at once; he had cough, which still continues and is now very urgent. His expectoration at present is very copious, frothy and purulent; he has paroxysms of partial suffocation. To-day (Nov. 3d) his pulse is 112; respiration 28, breathing quick, labored and catching. His appetite is feeble. The treatment has been anodynes, stimulants and expectorants. The resonance is very much diminished in right chest; the respiration is good above the line of the wound, and nearly wanting below. He died on the 9th of November.

Autopsy, 12 hours after death. Rigor mortis well marked. Right

chest filled with bloody serum, partially coagulated. There are in lower portion of right pleural cavity a number of somewhat purulent, quite offensive, disorganized clots of blood; also some spiculæ of bone. The pleural surface of right lung is adherent to the costal pleura along the inner surface of the third rib, except for a space an inch and a half long just outside of the tubercle of the rib; these adhesions are recent and moderately firm. The second and third ribs, particularly the second, are much fractured and comminuted opposite the anterior wound. The right lung is compressed against the vertebral column, and reduced to about one third its original size; it is firmly covered and bound down by recent formations of lymph. The right bronchi are all filled with a purulent, frothy secretion. The track of the bullet through the lung is a tube a little larger than the circumference of an ordinary-sized thumb, and is lined throughout with a firm membrane of lymph nearly one third of a line in thickness. This tube is filled with laudable pus, and opens freely into the right primary bronchus, towards the orifice of the posterior wound. The track through the lung is nearly healed; the lung is somewhat carnified, and crepitates but very slightly. The pleural surface of the lower lobe of the left lung adheres pretty firmly to the costal pleura at its inferior posterior part. The bronchial tubes are much congested, and are filled with a frothy, seropurulent matter. The lung contains very much venous blood. The scapula is fractured.

Case IV.—Private James T. Fairbanks, Co. B, 26th Mass., æt. 34. Wounded Oct. 19th. A Minié ball entered just below the outer third of the spine of the right scapula, and emerged just above the second rib, anteriorly towards the side of the chest. His cough was urgent at first; he had no bloody sputa, but great difficulty in respiration. Now the resonance and respiration are both diminished in right chest, the resonance tubular near base; the respiration is rather augmented in left chest, and there is some crepitus near base. Appetite, &c., fine; sits up and walks about a little. Sent north, supposed to have recovered.

Case V.—Capt. Rob't F. Wilkinson, 128th N. Y., Judge Advocate 19th Army Corps. Wounded Oct. 19th. A Minié ball entered at a point a little to the right of the ensiform cartilage, and emerged through the eighth rib near its angle, fracturing it; had some bloody expectoration at first, but no cough till three days ago (Nov. 3d). He walked three fourths of a mile after being wounded. At present his pulse is 90. Respiration 20; appetite fine; some coarse crepitation in right back and fine in left; expectoration free and bronchitic. He has also a flesh wound of the abdomen, and a fracture of the right humerus. I learn that soon after I saw him his expectoration became rather suddenly purulent, his cough having increased; he is now at his home in New York, and is fast recovering.

Case VI.—Corp. Charles Bosbourg, Co. A, 75th N. Y. Wound-

ed Oct. 19th. A Minié ball entered at the junction of the cartilage of the 4th rib, right side, with the sternum, and emerged through the costa of the scapula near its outer edge, about four and a half inches below the spine of the scapula. He spit more or less blood for five days; cough severe and urgent, breathing short and catching. He has been able to lie down always; now cough is diminishing and the expectoration is purulent and frothy. Both wounds are discharging laudable pus. Throughout the upper half of the right chest the resonance and respiration are diminished, good elsewhere on both sides. Appetite and general appearance very fair. Sent north, supposed to have recovered.

Case VII.—Wesley K. Stubbs, Co. A, 9th N. Y. Artillery. Wounded Oct. 19th. A Minié ball entered the thorax between the fourth and fifth ribs, two inches to the right of the sternum, and passed out between the right scapula and the spinal column. He had cough, and spit blood. Bloody sputa ceased after three days; was obliged to sit upright to breathe. His respiration was at first short and catching, and his countenance anxious. At present the expectoration is slight and frothy. Percussion:—resonance good, except in lower right back. Respiration good, except that there are mucous râles in both backs. Sits up; appetite and general appearance good. Sent north, supposed to be well.

Case VIII.—Geo. Franks, Co. H, 156th N. Y., æt. 49 years. Wounded Sept. 19th. A Minié ball entered left thorax, an inch and a half outside of the nipple, fracturing the third rib, and emerged just below the lower angle of the left scapula. Had bloody sputa at first, and cough. These symptoms lasted about four weeks. His countenance has been anxious, and his respiration hurried, sometimes as high as 40 per minute. There is extensive emphysema throughout left back. Hardly any respiration can be heard on left side, and the respiratory murmur seems to be diminished in right. The posterior wound discharges pus very freely. His cough is for the most part slight; when present it is painful, and the expectoration bloody. Appetite and general appearance fair. Remains Jan. 3d, 1865. Unable to be moved.

Case IX.—Serg't Gilbert H. Denny, Co. G, 18th Indiana, æt. 22 years. Wounded Oct. 19th. A Minié ball entered the thorax on a line with the nipples, between the sternum and right nipple, and emerged just below the right axilla, between the fifth and sixth ribs. His sputa were bloody immediately after injury, and he had cough; his breathing was hurried and anxious. On the 20th reached Winchester; his respirations were then 22 a minute. On the 1st of November his pulse was 128, and respirations 42. Now he restrains the cough as much as possible. The wounds are discharging freely. To-day (Nov. 7th) his respirations are 20 and pulse 80. Resonance and respiratory murmur diminished in right chest. Remains in Winchester, Jan. 3d. Unable to be moved.

Case X.—Henry B. Stanton, Co. D, 30th Mass. Vols., æt. 30 years. Wounded Oct. 19th. A Minié ball entered at the junction of the cartilage of the sixth rib with the sternum on the right side, and emerged just below the lower angle of the left scapula. He coughed at once, and spit considerable blood. Bloody sputa continued three days; was obliged to sit upright in order to breathe, his breathing short, catching and gasping. He was in the hands of the rebels all day; was told he would die, and was robbed of his watch, money and part of his clothes; his shoes were too small for a rebel officer who tried them on, and these he saved. He has had not much cough since the first few days after he was wounded, till lately. On right side the resonance on percussion is wanting, below a line connecting wounds. The respiration is diminished in right chest, and the gurgling of fluid, apparently in the track of the wound, can be distinctly heard. Both wounds are discharging slightly. Appetite and general appearance excellent. Jan. 3d, has gone home well.

Case XI.—John Doran, Co. G, 131st N. Y., æt. 56 years. Wounded Sept. 19th. A Minié ball entered between eighth and ninth ribs, on a perpendicular line dropped from left axilla, and was cut out just over the point where the eleventh rib, left side, joins the spine. He coughed at once, but did not spit blood for two days; his breathing was at first short and catching. Now, the anterior wound is healed, and the posterior is discharging. He is nearly well. Sent north, supposed to have recovered.

Case XII.—Albert Smith, Serg't Co. B, 29th Me. Wounded Oct. 19th. A Minié ball entered through the cartilage of the fourth rib, on the right side, near its junction with the sternum, and passed out just below the lower angle of the scapula. Had no bloody sputa, and very little cough; his breathing was short, but not very catching; he sat upright in order to breathe with more ease. Never has had any expectoration. Resonance and respiration both diminished on right side; both absent below a line connecting the two wounds. On the left side the respiration appears to be rather increased. Appetite and strength good. Sent home, supposed to have recovered.

Case XIII.—John Coleman, Co. I, 160th N. Y., æt. 17 years. Wounded Sept. 19th. A Minié ball entered right thorax at junction of third rib with its cartilage, and passed out through the right scapula, about an inch and a half from its internal border. His sputa were bloody for five days, and rusty for a fortnight afterwards. Was obliged to sit upright to breathe; his respiration was short and gasping; very free hæmorrhage and expectoration of blood. Has had paroxysms, threatening suffocation. Resonance and respiration slightly diminished somewhat below a line level with wounds, but good in character everywhere; somewhat puerile in left chest. Is gaining flesh and strength rapidly; goes all about the town.

Right chest is somewhat shrunken, and the motion of the right arm somewhat impaired from want of use. Sent north, well.

Case XIV.—Lorenzo Parker, Co. K, 29th Me., æt. 19 years. Wounded Oct. 19th. A Minié ball entered upper surface of right shoulder, just in front of the centre of the upper edge of the scapula, passing through the chest, and came to the surface just over the space between the angles of the fifth and sixth ribs, where it remained and can now be felt. He coughed considerably, and spit much bright blood; his breathing was short and catching; he has never been obliged to sit up to breathe. The wound is nearly healed. His appetite and general condition have been excellent, and he has experienced but slight trouble. He cannot take a very long breath; he is up and about the ward all day. The resonance is somewhat diminished in right side and back; elsewhere good in both chests. The respiration is diminished throughout the right chest, and nearly absent below axilla; rather puerile in left chest. He still (Nov. 7th) has some expectoration of frothy, somewhat purulent mucus. Sent north, well.

Case XV.—Addison Oliver, 1st Me. Battery, æt. 23 years. A large, stout, strong man, 6 feet high. Wounded Oct. 19th. A Minié ball entered left shoulder, an inch and a half below acromio-clavicular articulation, and passing through the shoulder-joint and thorax, was removed by an incision just below the inferior angle of the *right* scapula—making a wound seventeen inches long, from entrance to exit. He spit no blood when wounded, and had no hæmorrhagic sputa till Nov. 1. His condition was encouraging when brought to Winchester, three days after the injury. On the 1st of November pneumonia attacked him. He began to prefer the half recumbent position; had much pain when coughing; chills and delirium soon followed; the pneumonia became complicated with gangrene of the lungs, and he died on the fifth of November. The ball was found to have fractured the shoulder-joint, to have traversed the left chest and lung, to have fractured the fourth rib between its angle and the articulation with the vertebra, and to have broken the spinous process of the vertebra. The left lung was gangrenous, the right partially hepatized; exudations of lymph covered the pleuræ of both chests.

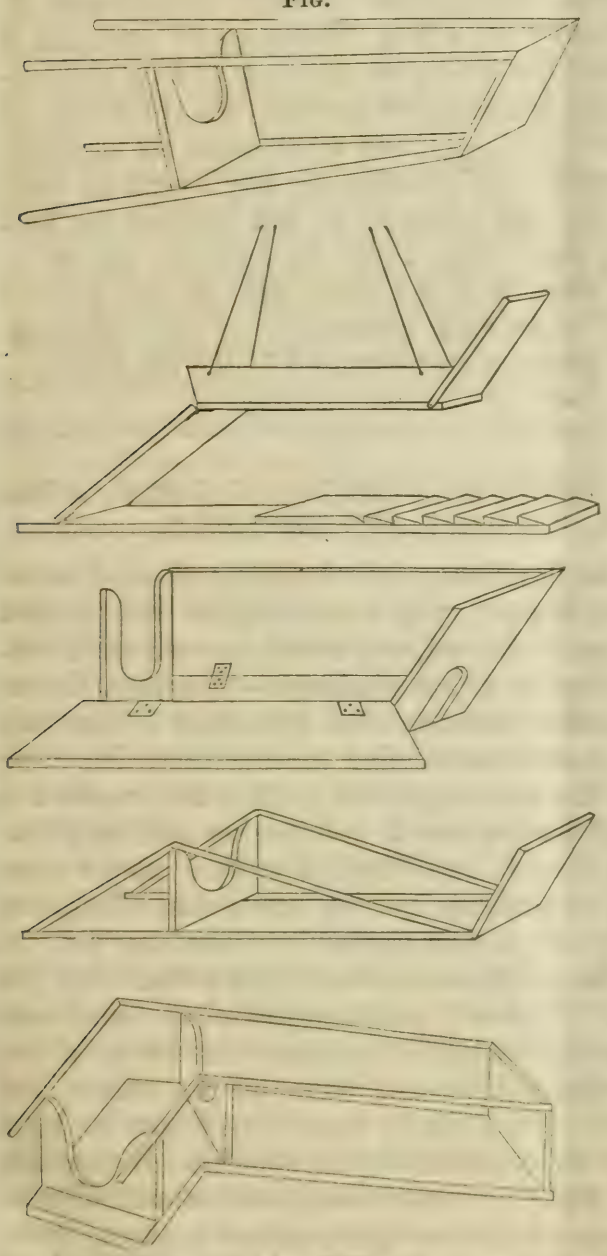
Case XVI.—Private Wm. H. Roberts, Co. F, 153d N. Y., æt. 19 years. Wounded Sept. 19th. A Minié ball entered the upper surface of the left shoulder, midway between the superior border of the scapula and the middle of the clavicle, and remained in thorax. He coughed much, and spit blood freely for three days. For two weeks he was obliged to sit upright to breathe. For some time he seemed to improve, but gradually sank and died, on the 22d of October, thirty-four days after he was wounded. No autopsy.

Case XVII.—Albert Page, Co. B, 29th Me., æt. 50. Wounded Oct. 19th. A Minié ball entered the left side of the right chest

four inches below the nipple, and passed out from the back over the 12th rib. Patient coughed much after being wounded, but does not recollect that he spit blood; has had continuous cough since. Now (Nov. 7th) his countenance is flushed; pulse accelerated; respirations 30 per minute; expectoration adhesive, viscid and bloody; is too feeble to bear a prolonged examination. He subsequently died.

Case XVIII.—Ransom Colbert, Co. K, 8th Vt., æt. 20 years. Wounded Oct. 19th. A solid shot struck him on the side of the left chest, fracturing the sixth, seventh, eighth and ninth ribs, and exposing the pleural cavity to within half an inch of the apex of the heart. Pieces of necrosed bone have come away from time to time; the discharge has been very free. Now there is a space 4½ by 3¼ inches, nearly filled by bright red granulations. His pulse is to-day (Nov. 7th) 135; his appetite is fair, and he is getting stronger every day. He was afterwards sent north, able to travel.

Fig.



Twenty-two cases of penetrating or perforating wounds of the chest have come under my observation during the last autumn. Of these, 15 have recovered, 5 have died, and 2 remain (Jan. 3d, 1865) in Winchester in a more or less critical condition. The treatment of these cases has been simple, and the "sealing process," as it has been termed, has never been practised. In some of the cases it would have been better, perhaps, if all of the broken and detached pieces of bone had been removed, no matter how freely the chest must have been opened. The percentage of recoveries following wounds of the thorax and lung is

very surprising, when the severity of the injury and the important organs lacerated are considered.

The drawings (see preceding page) executed by the Hospital Steward of the 176th New York Volunteers, represent various apparatus used in the treatment of fractures of the limbs, and are completed by strips of bandages fastened to either side of the apparatus, as represented in Fig. 2 (see last week's issue, p. 11). The apparatus here represented is ingenious, and the method of application very convenient. In the splints numbered 1 and 3 the limb can be placed on a double inclined plane, on a single inclined plane, or it can lie horizontally, according as certain of the supporting strips of bandage are lengthened or shortened. Perfect convenience in dressing the wound, opportunity for a free discharge of pus, and a free circulation of air around the limb are afforded, and by shortening one strip of bandage and lengthening another, the pressure on particular parts of the limb is changed, and those pains so common, when a limb is laid in a constrained position for any length of time, are immediately relieved, and the surgeon is not obliged to tuck compresses here and there, place rings under the heel, &c. &c., as he is when fracture boxes are used and the limb lies on the padded floor of the box. Patients expressed themselves as very comfortable when their limbs were placed as represented in the drawing.

A REVIEW OF RECENT WORKS ON SYPHILIS BY ZEISSL, BUMSTEAD, AITKEN, HALDANE AND DRYSDALE.

The history of syphilis is as the history of a building whose foundation-stone was laid by John Hunter, whose architecture was planned and whose walls were begun by Ricord, and which now stands a substantial mark of the industry of a few workmen—Fournier, Rollet, Lee, and Zeissl. Many another craftsman has from time to time lent a hand in its construction, sometimes adding to, sometimes impeding the progress of the work, till at length the edifice has reached a height at which, though still incomplete, it is imposing and durable.

The publications of the French and English writers above mentioned have the advantage of priority, but we know that Professor Zeissl has been for several years past in the habit of teaching daily to students from all parts of the world the lessons which he has only just now thought fit to publish. Formerly assistant to Hebra—that most shrewd of observers, and most delightful of teachers—he has been constantly in the midst of syphilis, following it in all its stages, and watching it in all its forms. His book is what it professes to be, a work especially devoted to the consideration of syphilis. It does not treat at all of gonorrhœa; it pays comparatively little attention to the local non-syphilitic ulcer, merely discussing its nature so far as is necessary to show how totally distinct it is from syphilis; but it deals most completely with syphilis proper.

Doctor Bumstead's book is a perfect compilation of all that is worth knowing on venereal disease in general. It is divided, in this edition, into three parts, which treat of gonorrhœa, chancroïd (local non-syphilitic ulcer), and chancre (primary manifestation of constitutional syphilis). It fills up a gap which has long been felt in English medical literature, by furnishing the English reader with a complete treatise on venereal diseases. The doctrines contained in it agree essentially with those of Zeissl.

With regard to nomenclature, it will be well to state at the commencement that the term *chancre* will be used to represent the true primary syphilitic affection; and the term *simple sore* for the purely local non-syphilitic ulcer. Zeissl employs the term chancre for the simple sore, and syphilis for the primary specific affection; but this is confusing to English readers, in whose minds chancre and syphilis are indissolubly connected. Again, Bumstead employs the word "chancroïd" for the simple sore; but this word was the origin of a faulty conception of the real nature of the sore, and was coined by Clerc, who supposes that the sore is the product of the inoculation of a chancre on one who is already syphilitic; that it is, in other words, a modified syphilis, just as varioloïd is a modified variola—a great error.

There are now recognized three distinct venereal affections, dependent on three distinct poisons: 1. *Gonorrhœa.* 2. *Simple sore*—a purely local affection, not infecting the system; derived always from a simple sore or bubo, and in its turn producing a simple sore when inoculated; communicable to the syphilitic and the non-syphilitic alike; capable of being repeated on the same person indefinitely, and therefore often multiple; having no period of incubation, but showing the effects of inoculation in a few hours, redness, and itching, soon followed by the formation of a pustule, which bursts and leaves a painful ulcer. The inguinal glands are often entirely unaffected; but if they be affected, one gland only, as a rule, swells, enlarges considerably, is painful, and tends to suppurate; the pus from this so-called bubo producing again, when inoculated, a simple ulcer like the predecessor. The ulcer is slow to heal, sometimes spreads and becomes phagedænic. With the healing of the sore, the disease is at an end; but it may recur any number of times in the same individual.

3. *Chancre* is the first manifestation of a constitutional disease—syphilis; is derived always from a chancre, or from the secretion of some later manifestation of syphilis (so-called secondary, probably, too, from tertiary affection), or from the blood and secretions* of a person affected with syphilis; is communicable only to the non-syphilitic, producing no effect whatever when inoculated on one that is syphilitic; cannot, therefore, be repeated on the same person, and is, as a rule, single; has a distinct period of incubation, from three to four weeks† on an average, during which time all signs at the point of ino-

* Semen and perhaps milk. Zeissl. † Zeissl.

culation disappear, till, at the end of the above period, there appears a papule, which gradually spreads in circumference, becoming at the same time indurated. This papule, in a few days—in some places sooner than in others—begins to exfoliate superficially, and secretes a scanty gummy substance, which, if the part be not exposed to friction, dries, and forms a crust that falls or is rubbed off, and leaves behind a disk-shaped, somewhat elevated prominence, cartilaginous to the touch, dull red in color, and glistening as if varnished (firnissartig). The centre of this, after a time, softens and breaks down, so as to become slightly excavated or scooped out, and to give the appearance of an ulcer. This, however, may not be noticed, if the original lesion by which the disease was communicated was superficial—a mere abrasion, as is so often the case in connection. The indurated mass varies in size from that of a pea to that of a bean; but it may involve the whole glans penis, or the whole of the circumference of the os uteri, or the whole of one labium. The inguinal glands, on one or both sides, become gradually enlarged and indurated, *that gland being first affected which is nearest the chancre,* and the others following in order, till Ricord's "Pléïade ganglionnaire" is formed, not painful, and not prone to suppurate. The chancre may occur, like the simple sore, in all parts of the surface of the body. It disappears slowly, the induration remaining sometimes for months, or, as some have observed, for years. It is followed, in from six to ten weeks from the time of the first appearance of the papule, by secondary symptoms. An individual once syphilitic is, as a rule, proof against a recurrence of syphilis; but, as in the case of the exanthemata, this is not invariable.

It may be asked, What means have modern observers employed, that they are able to lay down laws so entirely subversive of old doctrines? We answer, *inoculation,* and that not limited (which was the cause of Ricord's many errors), but practised largely and widely. This is the compass which has guided them amidst all the shoals and rocks of this most difficult question. No amount of clinical inquiry could thus have unravelled certain knots that entangled the subject. Herein, too, lies the reason why the French and Germans have gone ahead of us in this matter. Whether it be the English surgeon or the English patient who believes more implicitly in the maxim, *Fiat experimentum in corpore vili,* we know not; but certain it is that experimental inoculation of syphilitic virus on those who have never had syphilis would neither be suggested by surgeon nor tolerated by patient in any English hospital. It has been done, nevertheless, abroad, and that repeatedly, from a belief, no doubt, that great means must be employed to arrive at great ends.

Foremost among such experimentalists stand Waller of Prague, Danielssen of Bergen, Rollet of Lyons, and lastly, Hebra of Vienna.*

* We speak here only of true syphilitic inoculation on those who have never had syphilis, omitting mention of the thousands of non-syphilitic inoculations, which will be spoken of under Syphilization.

The next important question, which for a long time past has been insisted on by Zeissl, is the occurrence of *twofold inoculation* (doppelte infection). He points out that the terms "chancre mixte" and "chancre mulet," employed by the French, are improper, as implying that there is a positive intermixture or blending of the two poisons to produce one effect. This, however, is not the case. It is quite possible that both poisons may be communicated at the same time in one intercourse; that the simple ulcer may appear and go through its regular course; that afterwards, at the expiration of about three weeks, an induration may gradually show itself at the base of the ulcer (the syphilitic virus, which has been incubating, beginning now to manifest itself); and that there may result simple sore + chancre. But here there has been no admixture of the two poisons: each has produced its proper effects in its peculiar way; only, from the fact that the same spot has served for the introduction of both, an apparent complication has been produced.

On the other hand, a person who has a chancre may have intercourse with another person who has a simple sore. In this case, there will appear in a few hours signs of the sore developing itself on the top of the chancre; the result here being chancre + simple sore. Nay, further, one of the indolent indurated glands in the groin, caused by the syphilis, may become inflamed by the additional virus of the simple sore, and there shall be a bubo in a syphilitic gland. If, now, the pus from this bubo, or from the sore, be taken and inoculated on another part of the same person, it will give rise to a simple sore; or, on another non-syphilitic person, it will produce the same effect, *provided that none of the blood containing the syphilitic virus be mixed with the pus.* This is most important in the history of syphilis, first, as showing how distinct the two poisons are; secondly, as a warning that the surgeon must be very careful in his prognosis. If a patient consult him with a sore of seemingly the most innocent character, he must not pronounce positively that no secondary symptoms will follow, but must wait a few weeks for the possible appearance of the syphilitic induration, which may be already dormant in the system. Cases of the above kind are related by Fournier* and Rollet,† the latter of whom has inoculated a healing chancre with virus from a simple sore, and has clearly produced a simple sore on a chancre.

Zeissl has cut chancres out of the dead subject, and examined sections microscopically. He finds the induration to be caused by proliferous development of cells in different stages, many of which cells are already in a state of fatty degeneration. In a section perpendicular to the surface the papillæ are seen closely crowded together by abundant connective-tissue corpuscles. In a horizontal section there are seen numerous decussating fibrils of connective tissue, in the areolæ of which are imbedded connective-tissue cor-

* Leçons sur le Chancre. 1860. † Recherches sur la Syphilis. 1861.

puscles, some young, some degenerate. Barensprung states that the granular substance at the base of a chancre gives the amyloïd reaction with iodine, and consequently regards the induration as a manifestation of constitutional syphilis, in that its behavior, under the influence of this reagent, corresponds with that of the gummy tumor and other later manifestations of syphilis.

Although, up to a certain point, a believer in the cellular pathology, Zeissl questions Virchow's theory concerning the nature of the syphilitic diathesis,* that the virus stored up or encapsuled, as it were, in certain centres, is set free at intervals to poison the blood, and cause the well-known outbreaks of syphilis; and that, consequently, during the intervals of rest, the system generally is not syphilitic, but that the disease is strictly confined to those centres in which the poison is contained. To this Zeissl replies: How is it, then, that a syphilitic man will, during such an interval of rest, infect his wife, and have a syphilitic child? He thinks that the blood as well as the lymphatic system, having once undergone a specific change, remains so changed for life. He does not deny that swelling of the lymphatic glands is a proof that syphilis is still latent, but he does deny that the poison is localized in these glands. He also remarks that pigment-staining about the spot where a chancre has been, or about the seat of former syphilitic eruptions, is to be regarded with suspicion as a sign that the poison is still lurking in the system. The pages which treat of syphilitic eruptions are, as would be expected from Vienna, very elaborate.

Das spitze condylon, condyloma acuminatum, our *condyloma,* is generally believed to be never syphilitic. This is an error. It may germinate just as well on syphilitic as on unsyphilitic soil, whenever and wherever a proliferous cell-development takes place from the rete Malpighii. It not unfrequently happens that a warty outgrowth springs from a mucous tubercle, and presents to the naked eye, or to one examining carelessly, exactly the appearance of the non-syphilitic wart (such as is caused by the irritation of gonorrhœa, &c.). The real nature of such a growth depends on the nature of its *basis.*

The syphilitic affection of internal organs, *gummose geschwulst,* or *gummy tumor,* requires special notice. Virchow's description of these tumors is known to many.† They resemble, he says, most nearly young granulation tissue, and are formed by enlargement with hyperplasia of connective-tissue corpuscles, and softening of the intervening substance. After a time, the mass thus formed undergoes fatty degeneration in its centre, and breaks down into a tenacious synovia-like substance (whence the name). Wagner‡ regards them as distinct new formations, and gives the tumor the name of "syphiloma." Professor Aitken's pamphlet contains an account of several post-

* Cf. Virchow's Cell. Path. Transl. by Chance, p. 132.

† Uber die Natur der Constitutionellen Syphilitischen Affectionen. Archiv. 1858. Band xv. s. 320.

‡ Das Syphilom, oder die Constitutionelle Syph. Neubildung. Leipzig. 1863.

mortem examinations on soldiers who died with chronic syphilis, and in whom were found tumors of this kind occupying various organs of the body, but more particularly the lungs. Dr. Haldane relates a case of a prostitute who died suddenly: a number of deposits were found in the septum of the heart, which from their nature he supposes to be syphilitic gummata. Attention has also been recently called to the occurrence of such growths in various organs by Wilks,* Gambaco,† and others. Wagner's account of them is masterly, and his work will repay perusal.

A very interesting description of severe endemic syphilis follows. So terrible has been, at different times, the spread, and so severe the form of this disease, that various names indicative of its malignancy have been given by the stricken inhabitants ignorant of its nature. Thus the Radesyge, in Norway, 1720; and in Sweden, 1762; the Skerljevo, in Croatia, 1790; the Sibben, or Sibbens, in Scotland, at the time of Cromwell's invasion, were all instances of this. We have heard an excellent account of this matter from the lips of Professor Hebra, who visited Norway to inquire into the Spedalskhed, and was sent, in the year 1851, by the Austrian Government, to investigate the nature of the Skerljevo, which prevailed at that time. He spoke of this latter, and of the Radesyge, as being principally syphilis in various forms, hereditary and acquired, though both included some other diseases of the skin, lupus, &c.

Woe be to the wretch who falls into the hands of a believer in *syphilization!* We had occasion to see, several times, both in Paris and Vienna, patients who had been thus treated, and whose arms, back, chest, and legs were pitted with innumerable cicatrices. Nor shall we easily forget one "misérable," who lay with an enormous phagedænic sore, involving the whole of one buttock and the upper part of the thigh—a consequence of inoculation. This syphilization, or indefinite multiplication of simple sores by inoculation, and therefore really no syphilization at all, has been tried at Vienna, as elsewhere on the Continent, and with the anticipated result—complete failure to cure syphilis, or to prevent its recurrence.

For the simple sore, the *treatment* required is purely local: early cauterization with the Vienna paste, or Canquoin's paste ("composed of equal parts chloride of zinc and flour, dried by heat, to which alcohol is added gradually till a paste is formed; this is spread on a thin layer of cloth, and again gently heated. A disk corresponding in shape to the ulcer is cut, and retained on the surface previously cleansed, from one to three hours, or in large and phagedænic ulcers, from five to six") and cleanliness. Mercury is useless. For syphilis proper, mercury given in moderate doses is a valuable remedy. It is not to be administered with the idea of *curing* the disease, as quinine cures ague, but it promotes materially the *healing* of the chancre and

* Guy's Hospital Reports, 1863. Vol. ix., p. 1.
† Cf. Med.-Chir. Review, Vol. xxxi., p. 39.

the removal of the induration: it acts more like a specific in removing most secondary symptoms; and there are certain forms of tertiary syphilis which sometimes yield rapidly to mercury after resisting iodine and all other remedies.* Most of those who have seen much of syphilis must have met with such pallid, cachectic miserable cases (the effect of syphilis, too, not of mercury) who are restored to new life, and increase rapidly in weight, under the influence of mercury. The above is the unprejudiced decision pronounced by Hebra and Zeissl, after giving a fair trial to all the different plans of treatment recommended by different writers. They made a series of experiments with extractum graminis (most expectant treatment); they next gave iodine a fair trial; they treated all syphilitic patients with subcutaneous injections of cold water; they tried syphilization; finally, they have come back to mercury. The form usually prescribed is the bichloride (hydrargyri corrosiv. sublimat. Ph. Br.) of which 1-8th gr. is given daily, and, if necessary, increased to 1-5th; though this is seldom the case. Inunction is also practised by them; and a card may be seen hung up in their wards containing directions for inunction, and specifying the part of the body to be anointed on each day of the week. Both Zeissl and Bumstead speak highly of the efficacy of Lee's calomel vapor bath.

Space forbids us to take up the cudgels with the antimercurialists. We hope that Dr. Drysdale's well-written pamphlet will have the effect of checking the indiscriminate use of hydrargyrum in all diseases, and of cooling the passion for that panacea, grey-powder, which has so long prevailed among practitioners in this country. But, speaking with a prophetic spirit, we doubt whether he or we shall live to see the day when mercury will be abandoned in the treatment of true syphilis.—*Brit. and Foreign Medico-Chirurg. Rev.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, FEBRUARY 9, 1865.

MORTALITY IN OUR STATE ALMSHOUSES. ONE OF ITS CAUSES.—Considerable comment has been excited from time to time by the great mortality reported at our State Almshouses. Committees of visitation have made thorough examinations of these institutions, and have found satisfactory reasons for this state of things without being able, under existing regulations, to remove it. As a part of our system of public charities, there have been many things about these enormous pauper receptacles not at all flattering to our State pride or satisfactory to our benevolent instincts. We propose to call attention at the present time to one class of causes which swells the list of mortality at these institutions, and which demands immediate legislative action to put a

* See some very sensible observations by Wilks, loc. cit., p. 13.

stop to a practice as inhuman as it is disgraceful. We refer to the loose and irresponsible manner in which persons considered suitable for admission into them are often conveyed thither from long distances without any proper regard to their physical condition at the moment, to die almost immediately on arrival, or perhaps on the way.

We confess we were shocked beyond expression a few days since, when we heard from reliable authority the simple statement of the cruelties which have thus been perpetrated under the color of administering a great public charity. They can only be classed among the enormities revealed last year as practised upon some of the insane paupers in our country poor-houses. Poor sufferers, almost on their dying beds, have been hurried away, miles from the place of their abode, to draw their last breath in a few hours after reaching their destination, the event perhaps caused by the fatigue and exposure to which they have been so inhumanly subjected. We can hardly speak of such things with anything like patience. A few facts in our possession will be more eloquent than any poor words of ours.

We have evidence that within a year a man fatally burned was taken from Taunton to one of our State Almshouses in a comatose condition, from which he did not rally; a distance of some fifty miles. The same day a man was transferred from the same place to the same institution while very sick with ship fever.

A man was sent from New Bedford in a dying condition, and breathed his last within five minutes after he was laid on a bed. Another arrived in a dying condition and died the same night. In numerous other cases the patients have died within three or four days after their arrival.

A woman arrived from Boston in the last stages of labor, and her child was born, notwithstanding the utmost haste was employed in conveying her from the railroad to the almshouse, before her clothing could be removed. Two others arrived in labor, their pains having commenced before leaving Boston, and it is understood that the fact of their condition was known to the officers who hurried them off by the cars. In two instances within three months women have been sent, one from Boston, with her infant, the other from Roxbury by way of Boston, without any attendants, *only five days after confinement.* A poor girl was on her way, with an attendant, from a notorious physician's place in Boston, and died at the Titticut station.

The following is an extract from a letter which we have received :— "I was passing through the smoking-car (where the paupers are usually put), before the train left the Boston Depot, when my attention was called to a man who was resting his head on the back of the seat before him. He was dead. I detained the train, called an officer and had the body taken out. The next morning the papers reported a death in the cars from *heart disease.* I think from his looks it was a *broken* heart. This man was from Roxbury."

Patients affected with contagious diseases have been thrust into these institutions without warning or preparation on the part of the officers, exposing the inmates to great risks. We have already mentioned that ship fever has been thus introduced, and in two instances the smallpox was introduced into one of them, causing thirty cases of variolous disease in the institution. But we forbear. We think we have said enough to show great need of reform.

It would appear that by existing arrangements the duty of deciding what persons are in a suitable condition for removal to a State Almshouse is left in very incompetent or unworthy hands. It is very plain that in cases of sickness this question can only be decided by a reliable physician. It is cruelty worthy only of savages to hurry off to such a place a dying fellow-creature in the way in which it has too often been done, and it is injustice to the officers of these institutions to have the bills of mortality in them swelled by such additions. Last year, we understand, an effort was made to induce the Legislature to take some action in the premises, but the effort failed on account of an unfavorable report from the committee to which it was referred. This year the attempt has been renewed, and we hope it will meet with a better fate. It is a case which touches the honor of our State most closely. If it is intended to make charnel houses or pest houses of what were intended as places of refuge for the unfortunate, the fact ought to be known. It may not be amiss to state that this subject was brought before the Councillors of the Massachusetts Medical Society at their last meeting, and elicited very strong expressions of feeling from gentlemen present; it was referred to a committee for future action. We hope that our medical brethren throughout the State will at once exert their personal influence to bring about some legislative action which shall wipe out forever, at the present session, a stigma which such proceedings, unchecked, will soon make indelible.

The late Dr. Luther Metcalf Harris.—When a worthy gentleman, who has faithfully performed the duties required of him by the profession and the community, passes away, it is proper that a fitting notice be taken of his departure. Such a one was Dr. Harris, of Jamaica Plain. Through a long and useful life he industriously and unostentatiously labored for the good of others, in private services and in public office, with unaffected simplicity—happy in the conscious effort to be useful. Remarkably unassuming, he rather waited than sought opportunity. Ever ready to yield his claims for preferment, he desired no prominent part, content to serve wherever needed—

"Nor envy nor ambition knew."

Studiously inclined, he gave much time to literary pursuits, and especially to music, which he highly appreciated and for which he had a refined taste. His latter years were pleasantly passed in genealogical researches; until a gradually deepening cloud obscured his intellect. Tenderly cared for by wife and children, most kindly esteemed by neighbors and friends, he peacefully deceased on the 28th of January, 1865, aged 75 years and 8 months.

A friend has furnished the following items of his life-history.

Dr. Harris was born in Brookline, Mass., May 7th, 1789. Had his education at the district school, studying Latin and Greek, till he entered an apothecary's shop, at 15 to 16 years of age, and remained there fifteen months, "compounding the best recipes." Was fitted for college by Rev. Dr. Strong, of Randolph. Entered sophomore in 1808 at Brown University, and graduated in 1811. Immediately began the study of medicine with Dr. LeBaron, of Jamaica Plain, "near the pump." Heard Dr. William Ingalls's two courses of lectures on Anatomy. Read medicine three years, "with two years of riding."

Through Dr. LeBaron and Col. Dudley, was appointed surgeon and stationed at Fort Independence (1300 men) in the summer of 1814. For this service he, in late years, received a grant of land from the Government. In the spring of 1815 went to Oxford, N. H., and practised five years. Then, after a few months at Milton, returned to the edge of Brookline and Jamaica Plain. In 1823 he joined the Massachusetts Medical Society. Dr. LeBaron having removed to Roxbury "Street," he remained at Jamaica Plain for many years without any local competitor. As the town increased other practitioners settled near him, with all of whom he lived in perfect amity and good will.

We see it stated, on the authority of a despatch from Washington, that Ex-Surgeon-General Hammond has failed to get a hearing from the Senate Military Committee. They think it unwise now to reverse the action of the military court. Dr. Hammond's case is worthy of the sympathy of all honest men, and we hope he will receive it and be sustained by it, until justice, sure though tardy, is done him. The medical profession owe it to themselves and the country to use their utmost endeavor to have his respectful petition to the Senate listened to and fairly acted upon.

A useful Disinfectant. *Messrs. Editors,*—Among the many modern agents of this class of medicines, there is none that has proved so useful or been more generally used, than Labarraque's solution of the chloride of soda. But this preparation is not without a few minor obnoxious qualities, and, to remedy these qualities, the following method has been used.

Labarraque's solution is very seldom, if ever, used in the undiluted state, owing to the irritation it produces, water being generally used as a diluent.

That this aqueous solution produces an irritation of the surrounding healthy skin, erythematous in character, and at the same time is quickly evaporated, none will deny.

By diluting the strong solution with glycerine, in any desirable proportion, we have an agreeable disinfectant, and at the same time one which remedies the two evils, if such they may be called, above mentioned. The glycerine retards the evaporation, keeping moist for a number of hours, and at the same time we avoid the dripping from the use of the aqueous solution and the erythema it occasions.

It would seem that this preparation might be especially useful in army hospitals, where the supply of attendants is not the most bountiful. We have used it in a number of cases with entire satisfaction.

Boston, February 1st, 1865. M. F. Gavin, M.D.,
House Surgeon, City Hospital.

It is stated in the *Medical and Surgical Reporter* that the amount raised by subscription for the hospitable entertainment of the members of the American Medical Association at New York last year was $5,249. The number of delegates present was five hundred.

"Notwithstanding the handsome and liberal manner in which the Association was entertained, the amount collected for the purpose was found at the conclusion to be more than double what was necessary, and there remained a surplus, after all the bills were paid, of

$2,733.67. The disposal of this unexpended balance became a question of interest, which was finally settled as follows :—

"By resolution of the committee it was directed that the amount be returned *pro rata* to the contributors, or donated to the building fund of the New York Academy of Medicine, or to the New York Society for the Relief of the Widows and Orphans of Medical Men, as the respective contributors should designate. Accordingly the whole surplus, being 52·08 per cent. of the amount subscribed, was disposed of as follows: sixty-two contributors subscribing $1,990, had returned to them *pro rata* $1,036.43 ; forty-seven contributors subscribing $922.50, donated their surplus of $480.42 to the building fund of the Academy of Medicine, and eighty-five contributors of $1,601.50, donated their portion of the surplus, $834.02, to the Widows' and Orphans' Relief Society. Thirty-eight contributors, subscribing $735, failed to designate, as requested, what disposition should be made of their unexpended balance, amounting to $382.80, and this sum was consequently divided equally between the two societies above named, whereby the whole amount collected was finally disposed of, and the committee concluded their very satisfactory and interesting labors."

At the last sitting of the Academy of Sciences, Paris, a paper was received from Dr. Blanchet on three curious cases of constitutional lethargic slumber. One of them was that of a lady 24 years of age, who, having slept for forty days at the age of 18, and fifty days at the age of 20 during her honeymoon, at length had a fit of sleep which lasted nearly a whole year, from Easter Sunday, 1862, to March, 1863. During this long period a false front tooth had to be taken out in order to introduce milk and broth into her mouth. This was her only food ; she remained motionless, insensible, and all her muscles were in a state of contraction. Her pulse was low, her breathing scarcely perceptible ; there were no evacuations, no leanness ; her complexion was florid and healthy. The other cases were exactly similar.—*Canada Medical Journal.*

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, February 4th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - - -	32	46	78
Ave. mortality of corresponding weeks for ten years, 1853—1863,	38.6	39.2	77.8
Average corrected to increased population - - - - -	00	00	85.12
Death of persons above 90 - - - - - - - - -	1	0	1

Papers have been received, on the Subcutaneous Injection of Morphia, and on the use of large quantities of Sulphuric Ether without fatal effects ; also a letter from a correspondent in Vermont.

Deaths in Boston for the week ending Saturday noon, Feb. 4th, 78. Males, 32—Females, 46.—Abscess, 1—accident, 2—apoplexy, 2—congestion of the brain, 1—disease of the brain, 2—bronchitis, 2—cancer, 2—cholera morbus, 1—consumption, 15—convulsions, 1—croup, 2—debility, 1—diarrhœa, 1—diphtheria, 2—dropsy, 3—dropsy of the brain, 3—drowned, 1—erysipelas, 1—scarlet fever, 3—intemperance, 1—disease of the liver, 1—inflammation of the lungs, 5—marasmus, 1—old age, 7—paralysis, 1—peritonitis, 1—pleurisy, 1—premature birth, 1—puerperal disease, 1—skin disease, 1—smallpox, 2—suicide, 1—teething, 1—unknown, 6—whooping cough, 1.

Under 5 years of age, 27—between 5 and 20 years, 4—between 20 and 40 years, 18—between 40 and 60 years, 11—above 60 years, 18. Born in the United States, 55—Ireland, 19—other places, 4.

THE

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GUN-SHOT WOUNDS, PARTICULARLY THOSE CAUSED BY NEWLY-INVENTED MISSILES.

AN ESSAY WHICH RECEIVED THE FISKE FUND PREMIUM FOR 1864.—BY ALEXANDER M. BECKER, M.D., OF PROVIDENCE, R. I.

[Communicated for the Boston Medical and Surgical Journal.]

THE subject of "Gun-shot Wounds" is one of great interest, especially at the present time, when our country is engaged in a war which calls forth such large numbers of her sons, and exposes them to all the hardships and injuries of the field.

To treat this subject as fully as it deserves is, of course, impossible in an essay of this sort. I have therefore endeavored in the following pages to give a somewhat extended summary of the injuries which occur on the battle-field, with their consequences and treatment, as given by the best authorities, aided by my comparatively slight experience in the Army of the Potomac during the Peninsular Campaign.

For statistics I have been obliged to refer to Dr. Macleod's valuable work on the "Surgery of the Crimean War," as we have none, as yet, of the present war which are sufficiently connected to be of any value.

CHAPTER I.

The Peculiarities of Gun-shot Wounds, and their general Treatment.

The sensation caused by a gun-shot wound in a fleshy part, is usually described by the sufferer as resembling the effect of a smart blow from a supple cane. Some, however, feel as if a red-hot wire were passed through the part; while others are entirely unconscious of any wound, and are first apprised of it by the flowing of blood. This seems impossible; but Macleod, in his "Notes on the Surgery of the Crimean War," affirms that he personally "knew an officer who had both legs carried away, and who said it was only when he attempted to rise that he became aware of the injury received." The present war has also afforded instances of a similar character.

The "collapse" and mental trepidation which infliction of a wound, though useful as a diagnos gravity of the injury, is not entirely to be relied depends as much on the frame and "nerve" of t severity of the wound. It is, however, importan the "shock" succeeding gun-shot wounds is gre extremities are injured than when the arms su makes the remark, that the shock is always g strikes a muscle in action than when it impinges is relaxed.

The destruction caused by a ball depends on city, the distance at which it is fired, the directi on the part struck. If fragments of metal are happens during sieges and riots—a very lacer dangerous wound may be produced. The shape peculiar motion of the conical ball gives a very to its wounds from that caused by the round mu fired at short range, it strike a fleshy part, the co I think, less laceration than the old ball. But if range, it strike a bony part, with but little cover the hand or foot, then the tearing, especially at t much more marked. The cause of this will be f velocity, and also in the flattening of the ball a diameter being thus increased before it escapes.

It is not always so easy, as the description of one to suppose, to distinguish the wound of en exit. That the former is more regular than the true; but that the lips of the one are inverted other are everted, is seldom clearly evident. I ball be great, and no bone struck, the size and d wounds is very nearly the same. But if its fligh to be retarded by contact with the body, especi a bone or strong aponeurosis, then the wound of derably larger than that of entrance. And this of wounds caused by conical balls.

In M. Arnel's experiments, given in the *Journ*

above the patella of a soldier. The former had all the a
of the wound of entrance, and the latter of the wound of
opening of an abscess in the thigh, a fortnight after, gave
grape-shot, and it was found that each opening had been
a different ball.

M. Begin has made the following valuable observation
to the resulting cicatrices. That of entrance, he says, is
white, depressed, and often adherent to the underlying pa
that of exit is only a sort of irregular spot, which does n
to the parts below, and is sometimes so indistinct as to be
in the folds of the skin.

One marked characteristic of gun-shot wounds is, the
only by second intention. Occasionally, however, an exc
this rule occurs. Dr. Stewart, of the English Army, repo
which occurred during the Caffre war. A Fingo receive
in the muscles of the back, and union without suppura
place. Two things, however, must be necessary to produc
py a result—a most healthy and temperate patient, and a
flight of the ball.

Some very extraordinary cases are recorded, where a l
has entered through muscle, leaving so little appearance
sence as entirely to escape notice. Baron Larrey mentio
in which a ball weighing *five* pounds was extracted by hi
thigh of a soldier. The presence of so large a body had
detected by the surgeon in charge, and the patient expe
inconvenience from it, except a feeling of weight in the li
nen, too, mentions a case which occurred at the battle o
patam, in which a *twelve*-pound shot was found in the th
officer; and "so little appearance was there of a body of
that he was brought to the camp, where he soon expire
any suspicion of the presence of the ball till it was disc
examination."

Baudens affirms, that when a ball is cut out from amon
it is enclosed in a cellular envelope, which he calls "kyste
as contrasted with the "kyste definitif," which forms its
it has long remained within the tissues. I have never see
firmed by any other author, nor have I been able to

But it is on bone that we see the most destructive effects of a ball. In regard to the old ball:—1st. If its line of flight is very oblique, and it strike against a flat bone, it may be thrown off, causing no other damage than depriving the bone of its periosteum. But if this occur with the bones of the head, great danger may ensue, as will be shown in another place. And such wounds of the long bones, though apparently trifling at first, are frequently very serious in their results; both from subsequent disease of the bone, on account of the detachment of the periosteum, and from inflammation being set up in the medullary canal. 2d. It may sometimes be flattened against the shaft of a long bone, without subsequent injury. This, however, can only occur when the ball is almost "spent." 3d. It may turn round a bone without injuring it. 4th. It may notch or partly perforate a long bone; may even enter the medullary cavity and remain there, causing, of course, the most dangerous symptoms. 5th. If the force be a little greater, it may split the bone longitudinally, without causing a transverse fracture. A case of this sort is related by Leveillé, and quoted by Malgaigne, in which an Austrian soldier, at Marengo, was struck by a ball in the lower third of the leg. He walked several miles to the rear, where he was seen, and his wound thought to be very slight. A superficial exfoliation of the bone was alone expected. His symptoms, however, became so serious that the leg was removed, when it was found that from the place where the impression of the ball existed, there proceeded several longitudal and oblique clefts, which extended from the lower third of the tibia up to near the head of the bone. 6th. Into the spongy heads of bones a ball may be driven as into a plank of wood, with little or no splintering. 7th. It may pass through, causing a clean hole.

The conical ball, however, never acts in any of these ways. It is seldom, if ever, split itself, and always splinters the bone against which it strikes, to a greater or less extent, and that in the direction of the bone's axis. This tendency to splitting shows itself much more in a downward, than in an upward direction; so that the destruction which this ball occasions will be greater when it strikes the upper than the lower end of the shaft.

As a general thing any ball, no matter what its shape, will fracture and split a bone, if it strike about the middle of the shaft. But while the round ball causes but little comminution, the conical ball, especially if it have a broad deep cup at its base, like the Enfield rifle-ball, splits and fractures the bone to such an extent that large spiculæ are detached, and smaller ones are driven in all directions into the neighboring parts; and this is what renders fractures of the long bones, by the new ball, so dangerous.

There is no doubt but that a ball may remain imbedded in bone for a life-time, with very little if any inconvenience resulting therefrom; but this is decidedly the exception. Guthrie is very emphatic

in his directions to remove balls so placed, and predicts the most unfortunate results if this be neglected. And Malgaigne, after narrating several instances in which balls have remained without causing harm, concludes thus:—"It is necessary to mention these fortunate cases, as evidence of the resources of nature; but they hardly serve to weaken the force of the prognosis, when a ball cannot be extracted, or the essential indication of this sort of lesion, the extraction of a foreign body. This indication is, then, of the first importance."

Nerves usually escape injury by a ball. Still, if the ball has been rendered jagged by previous contact with some hard substance, it may cause grave injury even to the largest nerves, especially when they lie in close proximity to a bone. The paralysis which succeeds an injury to a nerve may come on at once, or be for a long time delayed; and may or may not be accompanied by pain. For instance, the hand has several times been known to waste, without pain, when some of its nerves have been injured.

But making all due allowance for the form, strong coat, and elasticity of arteries, it is wonderful how frequently they escape injury from gun-shot wounds. The rarity of primary hæmorrhage on the field is well known; and yet we constantly see wounds through the very course of large arteries. When primary hæmorrhage does occur on the field, it is more frequently from the veins, which are more easily cut than arteries.

We have fewer instances of the wandering of balls now than formerly. The conical ball generally takes the shortest route to and through its mark, and sometimes even further; for cases have been related where one ball has been known to pass through the bodies of two men and lodge in a third. But of the round ball many curious stories are told. Dr. Macleod, to whom I have before referred, narrates two instances: in one of these, the ball entered above the elbow and was removed from the opposite maxilla; and in the other it entered the right hip and was removed from the left popliteal space.

In examining a gun-shot wound, we must always bear in mind the possibility of some foreign substance, as a piece of the man's clothing or accoutrements, having entered with the ball; and its presence in the wound is often far more troublesome than the ball itself.

There has been a great deal of discussion and diversity of opinion in regard to the extraction of balls. Begin's precept, as given to the Academy, seems to me to coincide with both science and common sense. "Selon moi," he says, "l'indication de leur extraction est toujours presente; toujours le chirurgeon doit chercher à la remplir; mais il doit le faire avec la prudence, et la measure que la raison conseille. S'il recussit, il aura beaucoup fait en faveur du blessé. S'il s'arrête devant l'impossibilité absolue, ou devant la crainte de produire les lesions additionelles trop grave, il aura encore satisfait

aux principes de l'art; et quel que soient les resultats de la blessure, il n'aura pas a se reprocher de les avoir laisse devenir funestes par son inertie." If we compare the opinions of surgeons, we find that while civilians frequently consider it a matter of secondary importance, military surgeons always place great weight upon its accomplishment. The question is, not whether balls *may* remain in the body without causing harm, but whether they do so in the majority of cases. Statistics prove conclusively that in the majority of cases they *do* cause harm and annoyance. Consequently, as "science is not made up of exceptions," and it is the unquestioned duty of the medical man, in treating his patient, to consider his permanent welfare rather than his temporary comfort, it appears to me that the early extraction of the ball in wounds of this sort should *always* be accomplished when practicable.

We have in this country had very few opportunities of learning the subsequent history of men who carried unextracted balls. But M. Hutin, chief surgeon of the "Hôtel des Invalides," of France, tells us that while 4,000 cases had been examined by him in five years, only 12 men presented themselves who suffered no inconvenience from unextracted balls, while the wounds of 200 continued to open and close until the foreign body had been extracted. This evidence, coming from such a source, is, to my mind, conclusive. For there is no other institution in the world, to my knowledge, where the opportunities for examining this class of cases are so complete.

The extraction of a ball is not generally difficult, particularly if we can see the patient soon after the infliction of his wound. It is of great importance to extract the ball, if possible, before inflammation has set in; as otherwise the wound is more or less closed, we cause more pain, and our chance of easily finding the ball is diminished.

The first thing is, to place the patient in the same position, as nearly as possible, as that which he occupied at the time of injury; also to place ourselves, relatively to him, in the direction from which the ball came. Taking into consideration what effect the bones and tendons in the neighborhood may have had in deflecting the ball, and consulting the patient's sensations, we shall generally, without much difficulty, succeed in finding it. By examining the clothing, we shall discover whether any part of it has been carried into the wound; and we should remember that sometimes a ball will carry in a cul-de-sac of the clothes and be withdrawn by it. I have before alluded to the awkward mistakes which sometimes occur when two wounds, having the appearance of the wounds of entrance and exit, are in reality caused by two balls. This should always be borne in mind when making such an examination.

Macleod, to show the importance of an early and careful examination, as well as that we should never rely too much on the patient's statement, relates the following case as having happened to himself in the Crimea. "A soldier wounded on the 18th of June came un-

der my care in the general hospital. His right arm, which had been fractured compoundly, was greatly swollen at the time of admission. I was told, and accepted the story, that the accident had been caused by a piece of shell, to which species of injury the wound bore every resemblance, and that it had been removed in the trenches. At the earnest solicitation of the patient, I contented myself with applying the apparatus for saving the limb, without minutely examining the wound. When removing the limb at the shoulder, a few days afterwards, to my great astonishment a large grape-shot dropped from among the muscles."

Sir Charles Bell has shown how the nerves may indicate to us the course, and sometimes the position of the ball. He says, "So when a ball has taken its course through the pelvis, or across the shoulder, the defect of feeling in the extremity, being studied anatomically, will inform you of its course; that it has cut, or is pressing on a certain trunk of nerves."

We should always make certain of the position of a ball, immediately before taking any steps for its removal; remembering the rule laid down by Dupuytren, never to act upon information regarding the site of a ball, obtained the day before, from the very rapid manner in which they often shift from one spot to another.

If the wound be large, as it generally is from a conical ball, the finger is the best probe; otherwise, or if the wound be too deep for the finger, a large gum-elastic bougie is the best substitute.

There have been an infinite variety of instruments invented for the extraction of balls. Macleod prefers the common dressing forceps, if long enough and fine enough in the handle. Larrey used the polypus forceps in preference to anything else; and I must say that I agree with him in thinking them the most useful and convenient.

It is of great importance to sustain the limb with the disengaged hand, on the side opposite to that at which we introduce the forceps. If the ball lie at all near the surface, and especially if its course has been from above downwards, we should always cut upon it; as by this course we facilitate its removal, and provide an opening for the pus. The long continuance of the discharge, its gleety character, and the persistence of pain in the track, is almost always occasioned by the presence of some foreign body—it may be a mere shred—in the wound.

The constitutional fever which succeeds a gun-shot wound is generally, though not always, in proportion to the part injured. The fever will frequently be of an endemic or epidemic character; but in war the tendency seems chiefly to be to a low typhoid type.

The mitigation of the constitutional fever and of the local inflammation; the prevention of all accumulations of pus, by making judicious escapes for it; the application of light, unirritating dressings; rest, and attention to the essential principles of all surgery, comprise the general treatment which gun-shot wounds usually require.

In the early stages cold, even ice as recommended by Baudens, may be of great use; and in wounds of the hand and fore-arm, irrigation is said to be of service. But when inflammation and suppuration are present, hot applications will always be found the most beneficial, as well as the most grateful to the patient. Strict attention to the position of the limb is of the utmost consequence.

Soldiers in war are easily depressed, and should not be too sparingly fed, when admitted to hospital, unless suffering from a wound of the head, chest or abdomen. There is too much tendency to look upon gun-shot wounds, as a class, as highly inflammatory, and to treat them accordingly. Velpeau's rule, and it seems to me to be a common-sense one, is to remove his wounded and operated on as little as possible from their ordinary diet, when hungry, and when there is no disturbance of the digestive or circulatory systems.

By gentle syringing with lukewarm water, from one opening to the other, we get rid of any shreds of cloth, clots of blood, pus, &c., which may be lodged in the wound, sustaining the suppuration, with very little disturbance of the parts. The French are in the habit of employing, with apparent advantage, a lotion composed of one part of the perchloride of iron and three parts of water, in profusely suppurating wounds.

Shell wounds and grazes by round shot are often attended with much injury, deep seated, and often little suspected; and not unfrequently result in wide-spread sloughing of the soft parts. The following case, which occurred at Sadoolapore, is an excellent illustration of this, and is an instance of what in former times would have been set down to the wind of the ball. "Private Conally was hit by a round shot on the outer side of the right arm and thorax. A blue mark alone was occasioned on the arm, and little or no mark was found on the chest. He died in twenty hours, without having rallied from the shock. The peritoneal cavity was found full of dark blood. The right lobe of the liver was torn into small pieces, some of which were loose and mixed with blood. There was no sign of inflammation of the peritoneum, and the other viscera were healthy."

There have been many instances of the very near approach, and even slight contact of round shot, without any further inconvenience arising therefrom than might naturally be looked for from the unexpected and unwelcome vicinity of such an intruder.

[To be continued.]

The whole number of patients treated in the Hamilton (C. W.) City Hospital during the last year was 510—in-door, 293; out-door, 217. There were 16 births in the hospital during the year—males, 4; females, 11; stillborn, 1. Discharged—cured, 148; relieved, 56; not benefited, 11; deceased, 43.

LONG-CONTINUED USE OF SULPHURIC ETHER, WITHOUT FATAL RESULT.

[Communicated for the Boston Medical and Surgical Journal.]

Messrs. Editors,—Believing that the following fact is fully corroborative of the statement made by you in your last number, in reference to sulphuric ether, viz., "that it would be next to impossible for any one, even with the intent to commit suicide, to kill himself by this anæsthetic (sulphuric ether)," I hasten to send some details, for the correctness of which I can vouch.

In the spring of 1862, I was requested to visit F. X. S., residing in this city, then suffering under a periodical neuralgic attack of the most excruciating character. Having tried, but in vain, all the remedies which were suggested, I recommended change of air to the country, exercise, &c.

Soon after this, he addressed himself to another physician, who, during the paroxysms, administered chloroform; but, his sufferings continuing unabated, he then recommended him to try hydropathy in one of the establishments in the United States. While there, sulphuric ether was substituted for chloroform. But he soon returned to Quebec, and placed himself under treatment in one of our hospitals, deriving, however, no benefit. Finally, he went to board with a family in St. John's suburbs, and after having spent six weeks there, isolated from his friends, one of his brothers, who had visited him the night before, requested me to take him again under my professional care. I found him in the most wretched condition—face swollen, countenance haggard, emaciation and weakness extreme, in fact he looked like a ghost. His mind was completely gone; what little strength and energy remained to him being expended in his demands for ether, which had been removed from him. His landlady informed me that during the previous five weeks my patient had bought eighty (80) pounds of ether, of which but four pounds and a half remained. His sole occupation during those five weeks was to breathe the ether, which he did during the night as well as the day. His appetite was entirely gone, and during this whole period he had taken but the smallest quantity of food.

I ordered broths, wine, and such substantial food as he could be induced to take. In three days his mind was completely restored, and his strength improved. His neuralgic affection, however, continued, and he died some months after under the care of a quack.

Of course a considerable proportion of the above-mentioned quantity of ether would be lost during the process of inhalation; still for *five weeks* the man was almost constantly under its influence, and did not die. On the contrary, on leaving off the ether, he soon recovered from the effects of the enormous quantity he had previously taken; all which goes, in my opinion, fully to confirm your statement, namely, "*that it would be next to impossible for any one, even*

with the intent to commit suicide, to kill himself by this anœsthetic (sulphuric ether)."

F. A. H. LARUE, M.D.,
Prof. de Médecine Légale and Toxicologie, à l'Université Laval.

Quebec, Canada East, Feb. 1st, 1865.

ANTHELMINTIC PROPERTIES OF BENZINE.

PROFESSOR MOSLER has continued his researches on the anthelmintic properties of benzine, which, according to him, takes the first rank amongst all the remedies of this kind, and is tolerated by the human system in considerable doses without unpleasant consequences. Large doses of benzine kill the trichinæ of the intestines, and thus prevent the immigration of their progeny into the muscles. Benzine would therefore appear to be the best remedy for the early stage of trichinosis. Professor Mosler has employed benzine largely in the epidemic of that disease which raged last spring in Quedlinburg. At first it was given in "capsules gélatineuses," but this soon proved too expensive and troublesome, and the following formula was therefore adopted:—℞ Benzini, ʒ ij.; succi glycyrrh. mucilag. gummi. arab., aa. ʒ i.; aq. menth., ʒ iv.; a tablespoonful every hour or two hours (shake the bottle). This preparation agreed very well with the patients. Many of them mentioned that they felt much better after it, that the muscular pains were less severe, &c. They took two drachms per diem for four or six days in succession, and yet, although there was violent fever, no unpleasant results occurred which could have been attributed to the medicine. It seems that the poisonous effects of benzine observed in the first experiments on animals were partly due to the method employed. In those cases benzine was poured into the mouths of the beasts, and part reached the trachea and the lungs, after which fatal pneumonia set in. If, on the contrary, the benzine was mixed with the food the animals remained in good health. The general results of the administration of benzine in the epidemic just mentioned will soon be published. Professor Mosler afterwards experimented on four pigs, which were fed with trichinous rabbit's flesh. Pig number 1 was then left without any medicine, number 2 took sulphate of soda, 3 and 4 took benzine. In number 1 severe morbid symptoms set in about a fortnight after infection. The animal became much emaciated and weak on its legs, the eyes were dim, the voice exceedingly hoarse, and it often screamed with pain. The pulse was fast, the skin very hot, the thirst considerable. All these symptoms were entirely wanting in Nos. 3 and 4, which had eaten the same quantity of trichinous meat, but had been treated with benzine a week after infection. From this it was justly concluded that a much larger number of trichinæ had immigrated into the muscles of number 1 than in those of Nos. 3 and 4. In order to be quite certain about this point, twenty days

after infection a small piece of the pectoralis-major muscle was excised from the three pigs, and a quantity weighing one-twentieth of a gramme (less than a grain) was found to contain in number 1 about 257 trichinæ, while in number 3 there were 95, and in number 4 the same number. The worms were counted over several times in order to avoid mistakes, which proved very trifling. The morbid symptoms went on increasing in number 1 until three weeks after infection, when Professor Mosler thought of trying whether, by the administration of benzine in that advanced stage of the disorder, benefit might still be obtained. After the first dose had been given the severity of the disorder did no longer increase, and after a few others there was more appetite and less heaviness. The animal took altogether four ounces of benzine within twenty days, without any bad results. After that time most of the morbid symptoms had disappeared. A piece of flesh was now excised for ascertaining whether there had been any effect on the trichinæ in the muscles, but they were found to be still living, and even larger doses of benzine, which were subsequently given, killed only a few of them.

Pig number 2 was fed with the same quantity of trichinous rabbit flesh as number 1, but from the seventh day it took daily half an ounce of sulphate of soda with the food for some time. Copious diarrhœa ensued, but no intestinal trichinæ could be found in the fæces, so that it would appear that ordinary purgatives have no action on intestinal trichinæ. The symptoms of trichinosis were well-marked in this animal.

Pig number 3 was fed with trichinous meat as before, and had no medicine for eight days, in order that the use of benzine might only be commenced at a time when it is possible, in certain cases, to diagnosticate trichiniasis in man. After the first dose of benzine the animal passed sixteen ascarides, a fresh proof of the anthelmintic properties of this drug. No morbid symptoms appeared, from which it was concluded that benzine had killed, if not all, at least a large number of intestinal trichinæ. This supposition was confirmed by the examination of a piece of flesh excised from the pectoral muscle, and in which the number of trichinæ found was, as has been stated, considerably less than in pigs number 1 and 2. The animal continued to take two drachms of benzine per diem for some time, and did exceedingly well.

Pig number 4 was treated much in the same manner, and never fell ill at all. Benzine agreed so well with it that it grew very much, taking at one time two ounces of that drug per diem for five days consecutively. It would therefore appear that a cautious administration of benzine in man cannot be hurtful. Professor Mosler is at present experimenting upon the action of benzine on tapeworm, and it would certainly be a boon if he were to give us a certain remedy for this troublesome parasite, which so frequently baffles

all our well-meant and energetic therapeutical efforts.—*Berlin Correspondence of London Medical Times and Gazette.*

Bibliographical Notices.

Outlines of the chief Camp Diseases of the United States Armies as observed during the present War. A Practical Contribution to Military Medicine. By Joseph Janvier Woodward, M.D., Assistant Surgeon U.S.A.; Member of the Academy of Natural Sciences, Philadelphia; of the Pathological Society of Philadelphia, &c. &c. Philadelphia: J. B. Lippincott & Co.

Since the current of medical literature, which almost stopped at the beginning of the rebellion, began to flow again, the number of practical medical treatises on subjects directly connected with the one absorbing topic of the nation's interest has been steadily increasing, until now the American Army Surgeon need hardly look for the fullest information on the subjects which present themselves most frequently to his notice beyond the publications of our own country. In many respects he will find himself better instructed by these than by any works of foreign authors. So vast has been the scale on which the destructive game of war has been carried on, so novel the circumstances often under which immense bodies of men have been placed, that it has been found that peculiar features have marked the manifestations of disease, calling for special study and exactness in diagnosis, and peculiar judgment and care in management and treatment. The book before us is one of the best fruits of the practical experience of a faithful student and laborious worker in the melancholy field which the war has opened. Having in mind the preparation of such a work at a very early date, he has had constantly before him a definite object by which his abundant opportunities for observation and practice have been guided. This stimulus has kept his mind in constant activity and given precision to his researches. And we may well thank him for the honorable ambition which led him to pass beyond the bounds of daily duty, in itself a labor calculated to satisfy no mean ambition, and to take from the hours usually devoted to recreation or repose the time requisite for the task.

In addition to his experience in the field during the first year of the war, the author has enjoyed peculiar opportunities for the preparation of the work before us, by his position as Medical Historian of the Rebellion, under the direction of the Medical Department, by the abundant opportunities of observation afforded by the military hospitals at Washington, and by virtue of his office as Curator of the Medical and Microscopical Departments of the Army Medical Museum, which has opened to him a large field for pathological study. Making a diligent use of his opportunities, he has produced a work of great practical value. In turning over its pages we see at once that the author is a man of enlightened mind, a diligent and thorough student, conversant with the most recent views in pathology and histology, and wise in his theories of treatment. Made up, as the vast medical staff of our army is, of men from all parts of the country,

coming from districts where the most opposite types of disease are found, indoctrinated with the most diverse opinions on questions of therapeutics, it is easy to see how grave and wide-spread injury may result from preconceived views of treatment, directed rather against names than things, and controlled by local theories or customs. To meet such a danger, therefore, we cannot too much commend the wise, judicious and temperate spirit in which the work before us is written. We hope it will become a tent companion to the surgeons throughout our armies. It will be found a faithful adviser on all the topics of which it treats.

We do not propose to analyze Dr. Woodward's book—its character is well described by its title, and no analysis could do justice to a work of so decidedly practical a character. A few of the numerous statistical statements which it contains will interest our readers. Speaking of camp fevers, he says :—

"Camp fevers caused about one-third of all the deaths from disease reported in the army during the first year of the war ; nevertheless they have not been nearly so fatal, in proportion to the number of cases, as the camp fevers of the European armies. Of 74,619 cases, 6315 are reported to have died, which would be in the proportion of one death to every 11·8 cases. Compare these figures for a moment with those given by M. Scrive of the camp fevers of the French Army in the Crimea, where, out of 11,124 cases, 6018 deaths are reported, or one death to every two cases. The cases of our camp fever which assume in their progress a decidedly typhoid character, so as to be ordinarily confounded with typhoid fever, are the most fatal ; of the 74,619 cases above mentioned, 21,977 are specified in the reports as "Febris Typhoides," and of these 5608 died, or nearly one in four. Even this, however, falls far short of the French statistics.

"The mortality of the fever differs considerably in the various regions of the continent : among the troops on the Atlantic coast the ratio of deaths was 7·19 per thousand cases, or one death in every 13·9 ; in the great central basin between the Appalachian and Rocky Mountains it was 10·18 per thousand, or one in 9·8 ; while on the Pacific slope the ratio was 4·52 per thousand, or one in 22·1. It has been seen already that camp fever is more frequent in the central than on the Atlantic, and more frequent in this than in the Pacific region. It may now be affirmed that the severity and fatality of the disease pursue the same order of intensity.

"These figures will prove some guide to the surgeon in anticipating the results of cases. The utmost caution should, however, be used in prognosticating the result in individual instances ; the slightest cases occasionally terminate fatally, while on the other hand patients are unexpectedly snatched from the very jaws of death, and recover after all hope has been abandoned."

A good deal has been said, from time to time, of the comparative exemption of the United States Army from venereal affections, and this exemption has unquestionably been rightly attributed in a great degree to the superior moral character of our troops. As bearing upon this point we have the following statement. During the year beginning July 1, 1861, and ending June 30, 1862, 23,779 cases of venereal affection were reported as follows :—

Primary syphilis	6,359	cases.
Secondary syphilis	2,652	"
Gonorrhœa	11,638	"
Orchitis	2,722	"
Stricture of the urethra	408	"
Total	23,779	"

" So that one soldier in every 12 (11·8) suffered from affections of this order. Of these the total of syphilis, including both primary and secondary, was 9011 cases, or one in 31 (31·2). The total of gonorrhœa and its sequelæ (orchitis and stricture) was 14,768 cases, or one in 19. While it is true that in many instances the distance of the great camping grounds from cities has had its influence in producing this result, it must be admitted that when the loose mode of inspection of recruits, the liberal furlough system, and the general laxity of discipline which has hitherto prevailed in the armies of the United States, is taken into consideration, it is difficult to reconcile these figures with the idea advanced from many sources that syphilis prevails as extensively in the United States as in European countries. Compare, for example, the preceding statement with the condition of the British army in the United Kingdom as recorded in the statistical reports for 1859–60. In 1859 venereal diseases of every class are reported as having produced nearly one half of all the admissions into hospital, the figures being '422 admissions into hospital on account of venereal among every 1000 men serving in the United Kingdom.'

" In 1860 the proportion admitted into hospital was 369 per thousand.

" The average proportion of these two years would be more than one case to every three men (1 to 2·5), as contrasted with one to every twelve men (1 to 11·8) in our own army."

We are glad to see that Dr. Woodward is most emphatic in his condemnation of the so-called heroic practice in the treatment of the acute diseases of our soldiers. In discussing the treatment of pneumonia he says:—

" The treatment of pneumonia, as directed in the text-books most widely circulated in this country, may be briefly sketched as follows: Bloodletting, both local and general, purgatives, and antimonials in the early stages of the disease; mercurials in the stage of consolidation; expectorants and stimulants in the latter stages, after the expectoration begins to assume a purulent character.

" So far as the treatment of pneumonia in the army is concerned, there can be no doubt that the plan above sketched is altogether inadequate, and that it increases rather than diminishes the mortality of the affection. The experience of the last two years permits no other conclusion, and we are compelled to believe that bloodletting, antimonials and mercurials are not available for the treatment of camp pneumonia at least, whatever may be affirmed of their efficacy in private practice by those who still cling to the habitual employment of these renowned remedies."

We are forcibly reminded by this and similar paragraphs of the famous calomel and antimony Order of the Ex-Surgeon-General; and which, if the truth were known, would, we think, be found to have had not a little to do with the unrelenting hostility which has been

successful in depriving him of his place of usefulness and honor. The wholesale character of the Order may have embarrassed some medical officers who knew how to handle such deadly instruments understandingly, but we are firm in the belief that much more good than evil resulted from it. But this *en passant.*

We take leave of Dr. Woodward's book, with an apology to the author for so long delaying the notice which it should have received on its first appearance, and the assurance to our readers that it will well repay a careful and studious perusal.

A Handbook of Uterine Therapeutics. By Edward John Tilt, M.D., Member of the Royal College of Physicians; Consulting Physician to the Farringdon Central Dispensary, &c. &c. New York: William Wood & Co.

The name of Dr. Tilt is a reliable authority on the class of diseases to which he has devoted so much attention, and is almost as well known on this as on the other side of the water. Anything from his pen is sure to find interested readers, for we feel that he is speaking from an authoritative experience. The book before us is a pertinent illustration of this. It is sure to make its way wherever the name of the author is known. It is offered as the result of his patient study for years to determine the real, practical value of the various methods of treating inflammatory affections of the womb that have been advocated by eminent physicians during the past fifty years.

We have been struck in reading Dr. Tilt's writings by the great practical tact they exhibit; and we find this to characterize the present work. His introductory chapter on the moral treatment of the sensitive class of patients of which he is speaking, shows the author to be not only a gentleman, but one who shrewdly understands the psychological peculiarities of the gentler, we will not say the weaker, sex. And although it may elicit a sneer from the man who sees in such patients only subjects for a speculum exploration, which is to be employed on all occasions with as little hesitation or delicacy as is required of a dentist in pulling a tooth, yet we cannot too earnestly commend it to our younger brethren as worthy of their most attentive and considerate perusal. Professional success in this department especially demands of the physician great regard for the feelings of his patient, and great discretion. Nevertheless, there is no ridiculous squeamishness about our author, and he does not hesitate to use powerful methods of treatment when required. But he does not employ them haphazard, and he constantly shows how fully he recognizes the impressible nature of his patients, and the great liability in them to mimotic symptoms which call for the greatest judgment in managing them. Dr. Tilt's Handbook will find many interested readers, and is a valuable contribution to Uterine Therapeutics.

In the Butler Hospital for the Insane, Providence, R. I., during the last year there were admitted 49; whole number under care, 179. Discharged, 47—viz., recovered, 15; improved, 14; unimproved, 6; died, 12. On the 31st of December 132 remained.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, FEBRUARY 16, 1865.

THE PATRONAGE OF SCIENCE.—The support which New England has contributed to the cause of education during the last two or three years, a period in which her energies and sympathy have been so liberally bestowed in the holier cause of patriotism, is a matter in which we may certainly be excused for feeling a just pride, and which warrants bright hopes for the future of science in America. The entire absence in our country of that all-controlling central power which, when benignantly exercised, gives to the empire so much advantage over the republic in the foundation and support of great national schools, leaves to the wisdom and liberality of individual communities the whole burden of providing for the education of the people. How wisely this responsibility has been sustained in the management of our common schools, their reputation throughout the world bears satisfactory witness, but for thorough education in the higher branches of knowledge we have been obliged to depend upon the older and better endowed institutions of learning in Europe. That such is not to be the case always, however, our progress in the cultivation of some departments of science within a few years furnishes gratifying proof. The Chandler School at Dartmouth, the Sheffield School at New Haven, and similar schools of physical science connected with other colleges in New England, testify to the growing popular interest in these branches of education; but it is in Boston, where the first impulse was given to the advancement of such studies by one of her most liberal citizens in the foundation of the Lawrence Scientific School, that the most generous response has been made to recent efforts to provide for the establishment of institutions similar to those so famous in other countries.

It is only a few months since we noticed the dedication of the noble structure for the accommodation of the museum and library of the Boston Society of Natural History, which has been erected since the beginning of the rebellion, and endowed with a permanent fund by the princely liberality of a member of our profession and the community of which he was so long a citizen. We are happy to state that the crowds which fill its large halls on exhibition days demonstrate conclusively the wisdom of such generosity and the interest felt by all classes in the study of nature. Adjoining it, and still in the process of erection, stand the buildings of the Institute of Technology, also a monument to the munificence of this same patron of science. This institution, which is intended to supply the long-felt need of a complete polytechnic school in this country, is under the direction of Prof. William B. Rogers, and has also been most liberally provided with a fund by gentlemen of this city. We understand that it is proposed to open at once the School of Mines connected with it, and certainly no more auspicious time than the present could be chosen for its inauguration.

In Cambridge a new fire-proof building has been erected by the

generosity of one of our citizens for the invaluable herbarium of Prof. Gray, which that eminent botanist has presented, together with his library, to the University. Every student of nature must rejoice that this immense collection is at last placed in a safe and accessible situation, and that a fund has also been raised for its support and increase. The Scientific School, too, has for some time been suffering for want of sufficient means of support, and the laboratory was sadly out of repair. "At this juncture," we quote the words of the *Daily Advertiser*, "Mr. James Lawrence comes nobly forward, and at once serves the cause of education, and maintains the honor of his father's name by the gift, on the first of January, 1865, of fifty-two thousand five hundred dollars—twenty-five hundred to be expended at once in the equipment of the laboratory, and the balance to endow equally the chemical and the engineering departments. This act not only maintains the honor of the father's name, but enrols that of the son on the same illustrious page.

"The object of the Scientific School and the results of the education to be obtained there, have been topics of earnest discussion and of some decided differences of opinion. In a public address a few years since, it was claimed that this school at Cambridge had proved that a broad and liberal education could be given without the waste of years over dead languages. We believe that neither Mr. Lawrence, nor the faculty of the school, make any claims of this sort. In order to a liberal education there must be instruction in history, philosophy and religion, whether history be taken as including the languages which have played the most important part in early European history or not. The student who has already received a liberal education is best qualified to pursue any of the special branches taught in the Scientific School; and if the movement, now so general in our country, for providing education in physical science alone either leads our young men to forsake the colleges, or the colleges to neglect the three higher departments above named, it will be a serious calamity to our nation. But the founders and managers of the Scientific School at Cambridge would be among the first to deprecate such an extension of the movement; and this munificent gift of Mr. James Lawrence will enable the Lawrence Scientific School to become a school of higher order, capable of instructing pupils of the highest previous culture."

Thus much has been accomplished, even within a year or two, for the advance of science among us by the generosity of private persons. That much still remains to be done by others equally considerate of the interests of the highest branches of education in America is, alas! true. We commend to the notice of those who are satisfied with our present condition, in medicine as well as other branches of learning, the following extract from the admirable recent report of Rev. Thomas Hill, President of Harvard University:—

"These university lectures are not simply a means of diffusing knowledge; on the contrary, many of them have contained positive additions to science, and suggestions of value only to earnest and advancing students. Thus, although some of the courses have been addressed to others than students in the narrower sense, yet, as a whole, they have done something toward supplying the great educational want of our nation, a university. Until we have an institution which can give

the highest culture to men of the highest abilities (and we have as yet no institution that even attempts or pretends to it), we can only be an inferior people, dependent on the Old World for the finer products of human skill in all departments, and especially in science itself—we can only diffuse the knowledge that others have gained. If the genius of our colleges is such that they must be confined to the diffusion of knowledge, and not allowed to contribute to its increase, then it is time that we should found a new institution, whose principal aim should be to further sound learning, to advance science, to insure the cultivation of philosophy and art and belles-lettres, and politics in the best and widest sense.

"But in order to do justice to undergraduates, and indeed to the students of the professional schools and academic department, a large increase of our means is needed. Our nation is contented with schools for the education of the masses, and our Commonwealth is justly proud of having brought them to the highest state of efficiency. But she greatly errs in supposing that she has done for her university what is really demanded for the education of those men who are her honor and her defence, her men of highest talent and industry."

Healing Power in various Nations.—The great vital energy of savage, compared with civilized nations, is shown by the relatively greater healing power of nature *(vis medicatrix naturæ)* possessed by the former. The experiments made in this respect extend to all races. Leigh mentions the case of an Australian whose temporal bone had been fractured by a blow, and the temporal artery divided, and of another whose ulna and radius had been fractured in a terrible manner, that the first took part on the following day in some public meeting, and that, though worms appeared in the arm of the second, the recovery in both took place without any operation or even dressing. Similar cases are to be found in Barrington and Dawson. Though but one in four recover from the operations of extirpation of the penis and the testicles, which are performed on Negroes by the slavedealers in East Sudan, many examples prove that nature's healing power is as great here as among other Negroes. This extends also to the white races living in Africa, although Russegger points out that in the hot climate of tropical Africa, wounds heal very slowly in the European, especially during the rainy period. Others, however, maintain that in the tropics, *e. g.* at Trinidad, wounds heal rapidly even in Europeans. W. Earl ascribes the natural healing power among the Malays to their vegetable diet, which prevents violent inflammation. Petit reports a series of his own observations in Abyssinia, that those who are punished by having hands or feet cut off, as well as the children or adults who are emasculated or have the whole genitals extirpated, do not generally die from the operation, although the wounds are entirely left to the healing power of nature. Parkyns relates similar instances. To the Moors, Chénier ascribes that great innate healing power and insensibility to pain, which has been so often attributed to the native Americans. Rengger is also of that opinion, whilst many modern observers ascribe to the native Americans a highly sensitive and nervous constitution. The case resembles that of the Bedouin Arabs, who consider it a point of honor to exhibit no sign of pain.

With regard to the native Americans, a relatively greater healing power has been observed among the Blackfeet, the Indians of Paraguay and the Abiponians; and of native Mexicans we hear that they heal wounds which would be mortal to Europeans by merely washing them with brandy. Malays also frequently recover from injuries which would prove fatal to Europeans. Of twelve Tonga Islanders whose arms were cut off in the rudest manner, one only died from loss of blood and another from grief. Similar instances of Marquesas Islanders are reported by Marchand.

These examples prove that the healing power of nature is greater among savage than among civilized peoples. We must not, however, close these observations without mentioning another circumstance which has been made use of to establish the specific difference between the races of man, especially between the black and the white. It has been asserted that the lice of the Negroes are not only black and smaller than in Europeans, but that they do not exist in the former, whilst the European louse perishes in the tropics. Both these assertions seem to have been first made by Oviedo, which he qualifies by adding, that European vermin is rarely preserved, whilst that of the Indians only attacks some children of the whites born in America. As Peters proves to a certainty, that the European louse does not perish under the equator, there is no occasion to dwell further on this point. It is scarcely necessary to observe, that the domestic swine, though not specifically different from the wild hog, has a parasite which is wanting in the latter; the color of these animals changes with the color of the skin, on which account Sömmering did not consider the *pediculus nigritarum* as of a different species from the European louse. It seems also certain that both the head louse and the *p. pubis* of Negro nurses passes to white children. Quandt is at any rate incorrect when he asserts, that the fleas and lice of Indians and Americans did not infest Europeans. Neither do the various species of intestinal worms exclusively infest one race, though one species may more or less predominate in any people. Thus in England, Holland and Germany the *tænia solium* prevails; in Switzerland and in Russia, down to Königsberg, *bothriocephalus latus;* in the south east of France both prevail; in Abyssinia and among the Hottentots *tænia* predominates.—*Waitz's "Introduction to Anthropology."*

Chittenden County, Vt., Medical Society. *Messrs. Editors,*—An association of physicians has recently been organized in Chittenden County, Vt., under the above name. It is composed only of such practitioners of medicine as are eligible to membership in the State Society. The officers for the ensuing year are—Benjamin Fairchild, of Milton, President; L. F. Burdick, of Winooski, and H. N. Curtis, of Jericho, Vice Presidents; J. Fay Miles, of Hinesburg, Secretary; C. A. Sprague, of Williston, Treasurer; L. C. Butler, of Essex, F. F. Hovey, of Jericho Centre, and A. C. Welch, of Williston, Executive Committee. The annual meeting of the Society is held in October, and it is designed to hold quarterly meetings for mutual improvement in the science of medicine. At the meeting held on the 25th of January, a resolution was passed pledging the members of the Society to counsel with no quack or irregular practitioner, even though he may

have a diploma from a regular medical institution. The force of this resolution will be more apparent when I mention the fact that there are in this County and vicinity, graduates of recognized medical schools who are imposing upon the community under the appellation of Homœopaths, Eclectics, &c., and are anxious to be recognized as within the pale of the legitimate profession. It was deemed proper to have some concerted action against any recognition of their claims, as well to protect ourselves from imposition as to maintain the proper dignity of our noble profession. Every town in the County save one is represented in the Society, and its meetings promise to be interesting and profitable. At the meeting in April next papers on various subjects will be presented, together with written notes of important cases occurring in individual practice, of which your correspondent will keep your readers thoroughly informed.

There is in this vicinity a peculiar eruptive disease which exhibits more nearly the characteristics of *scabies* than any other of the skin diseases, and yet which is not amenable to the usual treatment for that eruption. It makes its appearance on the hands, but not particularly between the fingers; seldom, so far as my observation extends, in the groin; sometimes upon the abdomen, back and lower limbs, and upon the fore-arms. It is characterized by excessive itching, pustular eruption, scabbing, and when the scab peals off a redness remains underneath, which continues some days. It is highly contagious, and does not seem to require actual contact to propagate itself. It is said to have been brought into this vicinity from the army. What is it, and what will cure it? Will some of your correspondents inform us?

CLIO.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, FEBRUARY 11th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week	44	47	91
Ave. mortality of corresponding weeks for ten years, 1853—1863,	37.8	39.9	77.7
Average corrected to increased population	00	00	85.01
Death of persons above 90	0	0	0

BOOKS AND PAMPHLETS RECEIVED.—Fourteenth Anniversary Meeting of the Illinois State Medical Society, May, 1864.—Defective and Impaired Vision, with the Clinical Use of the Ophthalmoscope in their Diagnosis and Treatment. By Lawrence Turnbull, M.D., Philadelphia.—Reports of the Trustees and Superintendent of the Butler Hospital for the Insane, Providence, R. I.—Report of the Pennsylvania Hospital for the Insane, for the year 1864.

DIED,—In this city, 10th inst., after a short illness, Peter Renton, M.D., aged 63 years 9 months and 5 days.

DEATHS IN BOSTON for the week ending Saturday noon, Feb. 11th, 91. Males, 44—Females, 47.—Accident, 4—anæmia, 3—apoplexy, 5—inflammation of the bowels, 1—congestion of the brain, 1—disease of the brain, 3—bronchitis, 2—consumption, 17—convulsions, 2—croup, 1—debility, 2—diphtheria, 1—dropsy, 2—dropsy of the brain, 3—dysentery, 1—erysipelas, 1—scarlet fever, 2—typhoid fever, 1—disease of the heart, 2—infantile disease, 6—disease of the liver, 1—congestion of the lungs, 4—inflammation of the lungs, 7—old age, 4—pleurisy, 2—premature birth, 1—puerperal disease, 1—smallpox, 3—ulceration of the stomach, 1—unknown, 6—whooping cough, 1.

Under 5 years of age, 28—between 5 and 20 years, 10—between 20 and 40 years, 23—between 40 and 60 years, 14—above 60 years, 16. Born in the United States, 59—Ireland, 24—other places, 8.

THE

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EARLY DIAGNOSIS OF PUERPERAL INFLAMMATION OF THE EYEBALL.

BY HENRY W. WILLIAMS, M.D., BOSTON.

[Read before the Boston Society for Medical Improvement, Feb. 13th, 1865, and communicated for the Boston Medical and Surgical Journal.]

ON the 12th of January, 1865, I saw a lady of about 25 years of age, Mrs. ——, who had been confined four weeks previously. Though not getting up well, her symptoms had not assumed a serious character, but had been those of debility. On the morning of that day, however, she complained of enfeebled sight in the right eye, and, by afternoon, the loss of vision had become complete. Slight irregularity of the pupil and considerable chemosis beneath the conjunctiva were noticed by her attending physicians. I saw her in consultation in the evening, and found, in addition to the above symptoms, a slight tenderness of the globe when pressed upon, and a total want of perception of light. The chemosis and a slight œdema of the lid made it difficult to determine if there was any increased tension of the globe, as the infiltrated tissues had the effect, as it were, of a cushion interposed between the finger and the eyeball, and, with the tenderness, of which the patient complained, prevented such pressure from being made as was necessary to determine the presence or absence of abnormal hardness.

In order not to fatigue the patient, an ophthalmoscopic examination was made while she remained in the recumbent posture. The pupil was found to have become adherent at several points to the capsule of the lens; but otherwise its area seemed sufficiently clear to allow of a view of the fundus of the eye. This could not, however, be seen—neither the papilla nor the retinal vessels being distinguishable; but a greyish opacity was observed, apparently almost at the fundus, which resembled in color, though not in other appearances, a separation of the retina.

The diagnosis made was, that fibrinous exudation had taken place

in the posterior part of the eyeball, and that this was perhaps a commencement of suppurative ophthalmitis.

As the lady complained of no pain, and as her general condition was such as to forbid a too active treatment, I could only advise the use of atropia, to detach the recent adhesions of the edge of the pupil and lessen the congestion of the internal vessels. Tonic general treatment was continued.

On the morning of the 13th, the chemosis and the tenderness on pressure had slightly increased. The adhesions had partially yielded to the atropia, allowing of irregular dilatation of the pupil. At evening the œdema of the lids had increased, and there was more tenderness.

On the 15th the lids were less œdematous and could be more readily opened, and the chemosis had partially subsided. The pupil was moderately dilated. No change was observable upon simple inspection of the field of the pupil, and, as the patient had during the last two days become gradually weaker, no examination was made with the ophthalmoscope. She died on the morning of the 17th.

At the autopsy, made by Drs. Green and Swan, 24 hours after death, some serous fluid, perhaps effused shortly before death, was found within the meninges—the kidneys soft and friable; but it was difficult to determine what was the cause of death. The eye was removed and carefully examined. On making a section across the equator of the globe, a portion of the retina was found to have become raised from the choroïd by serous effusion. Near the optic nerve entrance a small collection of pus was found between the retina and the choroïd. The retina was thickened throughout its whole extent, and spots of extravasation were seen here and there. Near the ora serrata the retina and vitreous had become incorporated into a tough yellowish fibrinous mass, apparently just ready to undergo purulent transformation; an opinion which was confirmed on microscopic examination.

Had this patient lived and been in a less asthenic condition, there is every probability that the symptoms of active inflammation of the entire globe would soon have declared themselves, unless averted by suitable treatment; a consideration which indicates the importance of an early recognition of the first symptoms of this rare but very grave affection.

Arlington Street, 13th February, 1865.

THE smallpox has been prevailing very extensively for some time past. In New Orleans the disease seems to be epidemic. Jan. 8th there were not less than fifteen hundred cases in the city and vicinity. More than one hundred patients had been admitted into the hospitals in one day, and the average was not far from seventy-five a day. An extensive smallpox hospital has just been completed, capable of accommodating five hundred patients.

SUBCUTANEOUS INJECTION OF MORPHIA TO CHECK OBSTINATE VOMITING.

By A. W. Thompson, M.D., Northampton, Mass.

[Communicated for the Boston Medical and Surgical Journal.]

Patient 22 years old; temperament nervous-sanguine; organization delicate but well balanced; has never been sickly, but is less robust than her brothers and sisters. Years ago had colic occasionally; and before her marriage, which occurred a year since, and while at the head of a difficult school, was sick a few times during the two or three years of my cognizance of her health, with menorrhagia, following an omitted menstrual period or two. She is not at all an invalid, but has a dominating brain and nervous system.

Case.—The patient was visited at one o'clock, A. M., of the night after last Thanksgiving (25th Nov., 1864). Was then in the third month of her first pregnancy. Almost since conception has suffered considerably from nausea, lassitude, and vitiated functions of alimentary canal and associated organs. A fortnight previously, applying for advice, she was treated with mass. pil. hydrarg., followed by pil. rhei c., and then put upon regular, gentle laxatives, diet prescribed, and a rational degree of rest of mind, body and stomach carefully enjoined. She was immediately better, and has since suffered scarcely at all from previous symptoms.

On the day previous to my visit, however, she sadly disobeyed orders. She attended church, walked a mile to a friend's, where she partook zealously of Thanksgiving dinner, joined a sleigh-riding party, walked home, and finally made a call in the evening.

At ten o'clock, P.M., she began to vomit—nausea and straining excessive. During the three hours before I first saw her, sinapisms had been applied to the epigastrium, and she had tried pills of calomel and opium—half a grain of each in a pill—but the pills were rejected as fast as swallowed.

At one o'clock, A.M., she was vomiting, principally digested food, with some admixture of bile; nausea, retching, prostration and anxiety considerable. A scruple of pulv. ipecac. was soon administered, and she was encouraged to drink freely of an herb tea (thoroughwort) at the same time. After copious vomiting, which occurred at the expiration of a tranquil interval of about twenty minutes from the time she took the emetic, she was quite easy for nearly an hour. I then left her, ordering reapplication of mustard, strict rest, nothing to be swallowed, and an opium pill at the end of another hour, if vomiting should not return and the patient should not sleep.

At six o'clock, A.M., word was brought that "she had been vomiting bilious frothy stuff" constantly since shortly after I left. Ordered ten drops of spiritus ammoniæ aromat. in water, to be repeated in half an hour.

At ten o'clock, A.M., patient was again visited. Condition aggra-

vated—pulse small, and extremities cold; vomiting, or efforts to vomit, almost incessant. Creasote was tried; one drop in demulcent solution every half hour.

One o'clock, P.M., no change for the better. Hypodermic injection of morphine was resolved upon. One fourth of a grain of the acetate of morphia, dissolved in one drachm of pure water, was deposited under the skin of the arm above the elbow. Apparently the mental impression, and slight shock from the little operation arrested vomiting for the time being. It did not return. Fifteen minutes after the exhibition of the remedy, she said, smilingly, that "she was all right;" fifteen minutes more, and she was asleep—neither vomiting nor nausea returned. The patient recovered rapidly; and has, down to present writing (24th Jan., 1865), been as comfortable as the average of women in her situation.

DR. A. R. BECKER'S PRIZE ESSAY ON GUN-SHOT WOUNDS.

[Continued from page 56.]

Chapter II.

Chloroform; Primary and Secondary Hæmorrhage; Tetanus; Gangrene.

Nowhere do we so thoroughly appreciate the advantages of anæsthetics as in the field. We are enabled by them to soothe the agony produced by the terrible wounds which continually come under our notice in war, and also with their aid to perform many operations which were otherwise impossible. Macleod gives his opinion very decidedly on this subject in these words:—"For my own part, I never had reason for one moment to doubt the unfailing good and universal applicability of chloroform in gun-shot wounds, *if properly administered.* I most conscientiously believe that its use in our army directly saved many lives; that many operations necessary for this end were performed by its assistance which could not otherwise have been attempted; that these operations were more successfully, because more carefully executed; that life was often saved even by the avoidance of pain; the *morale* of the wounded better sustained, and the courage and comfort of the surgeon increased. . . . . I think I have seen enough of its effects to conclude that if its action is not carried beyond the stage necessary for operation, it does not increase the depression which results from injury, but that, on the contrary, it in many instances supports the strength under operation." Many prefer ether to chloroform, believing the latter to be a most dangerous agent. But if the surgeon will assure himself that there exists no disease of the heart, brain or lungs in the patient; if proper care be taken to give free access to the atmospheric air, and the pulse of the patient be carefully watched, I do not be-

lieve that any pernicious effects will be found to follow the use of chloroform. (To men who have lost much blood, however, it must of course be administered with great care, from the rapidity of its absorption by such persons.) Our distinguished surgeon, J. M. Carnochan, M.D.P., of New York, has been kind enough to allow me to quote his experience on this subject. He says:—"I have administered chloroform in about three thousand (3,000) cases, and so far I have never had any fatal effects resulting from its administration in my hands. . . . . I would, moreover, state that I invariably use the pure Scotch chloroform, regarding ether, or the combination of ether and chloroform, as recommended by some physicians, as entirely inferior."

Chloroform is more applicable to field service: 1st, because a much less quantity is needful to bring a patient under its anæsthetic influence; 2d, because its action is more prompt; and, 3d, because it is much less likely to produce nausea and vomiting than ether. And these are important considerations, where time is so valuable.

Hæmorrhage was in old times the Military Surgeon's great bugbear. Since, however, we have found out that it is not of such frequent occurrence on the field as was supposed, and the means of arresting it are better understood, it is not so much feared. There is, it is true, a gush of blood when an artery is opened by a ball; but the artery soon retracts and closes itself. Larrey mentions a case where a soldier, struck on the lower third of the thigh by a ball, suffered one severe hæmorrhage, which was never repeated. The limb became cold, the popliteal ceased to beat, and the ends of the divided femoral could be felt when the finger was placed in the wound. This man recovered perfectly. And the younger Larrey records a case from the wounded of the siege of Antwerp. A shell passed between a man's thighs, and, destroying the soft parts, divided both femorals; yet there was no hæmorrhage, although the pulsation continued in the upper ends of the vessels to within a few lines of their extremities.

There has been a great deal said about the advantage of carrying a number of tourniquets into the field, to arrest primary hæmorrhage; but the surgeon's place in battle being at the rear, he has but little opportunity to carry this suggestion into effect. An intelligent soldier, however, can easily make a tourniquet with his handkerchief and bayonet, or a piece of stick.

I have before alluded to the strange manner in which arteries sometimes escape injury. The following case came under my notice during the Peninsular Campaign in Virginia. A ball passed through the neck of a soldier, just posterior to the carotids on both sides, and anterior to the spine. This man recovered perfectly in a very short time, not having had a bad symptom. Dr. Macleod relates two or three cases, so remarkable that I cannot help quoting them. "A soldier of the Buffs was wounded by a rifle-ball, which struck

him in the nape of the neck. It passed forwards round the right side of the neck, going deeply through the tissues; turning up under the angle of the inferior maxilla, it fractured the superior maxillary and malar bones, destroyed the eye, and escaped, killing a man who was sitting beside him. This patient made a rapid recovery.—A French soldier, at the Alma, was struck obliquely by a rifle-ball, near to but outside the right nipple; the ball passed seemingly quite through the vessels and nerves in the axilla, and escaped behind. His cure was rapid and uninterrupted.—Another Frenchman was struck in the trenches by a ball, a little below the middle of the right clavicle. The ball escaped behind, breaking off the upper third of the posterior border of the scapula, and yet he recovered perfectly, without any bleeding taking place."

I had, last June, the opportunity of seeing a very interesting case at Hampton Hospital, Virginia, which was under the care of my friend Dr. Charles F. Bullen, of Montreal, C. E. (at that time Act. Assis't Surgeon U.S.A.), and of which he was kind enough to give me a copy of his notes. "Adam Grinun, private, Co. D, 7th Conn. Vols., aged 21, was wounded before Petersburg June 9th, 1864, by a rifle-ball, which fractured the acromion end of the right clavicle, passed beneath the scapula and out below the lower border. On admission to the Hospital, three days after the injury, some fragments of bone were removed. The wound looked healthy, and continued discharging laudable pus and granulating till June 28th, 11, A.M., when secondary hæmorrhage occurred. He then lost about six ounces of blood before it was checked by pressure.

June 29th, 10, A.M.—Hæmorrhage again occurred, more severely than before, losing from fourteen to sixteen ounces of blood. The cavity of the wound was by this time much enlarged. The hæmorrhage was again apparently checked by plugging the wound with lint saturated with perchloride of iron. But in two hours the whole of the tissues between the wound and the neck were engorged with blood, the swelling rapidly increasing, and thus showing that he was still bleeding. After consultation, it was decided to stimulate freely and give narcotics to relieve pain, and let him remain till morning.

June 30th, 11, A.M., being in about the same condition—the tongue dry and glazed, pulse 120 and very weak, and with the engorgement gradually increasing—the subclavian was ligated successfully in the first part of its course. Coagula were then removed from the cavity of the wound, and it was syringed out with ice-water, no bleeding being apparent. Immediately after the operation he rallied; the tongue became moist; pulse at left wrist 110, at right wrist *none*. The temperature of both arms was the same, and continued so throughout.

July 1st, 10, A.M.—Left pulse 110, right barely perceptible. Patient in good spirits; takes nourishment freely, but complains of pain in swallowing. 10, P.M.—Left pulse 112, right same as in the

morning. Ordered ℞. Liq. ammon. acetat., ʒ i.; tinct. aconit. ♏ v.; to be taken every four hours.

2d.—Left pulse 110, right increasing a little in strength; no pain in swallowing, and improving.

3d.—Left pulse 108, right same as yesterday.

4th.—Left pulse 100, right same as yesterday; takes nourishment freely, and both wounds looking healthy and well.

5th.—Left pulse 96, right same as yesterday.

6th.—Left pulse 90, right same as yesterday. Omit medicine.

7th.—Left pulse 90, right same as yesterday. Complains of pain in the region of the heart, but no abnormal sounds heard.

8th.—Left pulse 120, right same as before; tongue dry and glazed. At 9, P.M., he had a rigor.

9th, 7, A.M.—A slight hæmorrhage from the point where the artery was ligated. The wound was plugged and pressure employed. At 10, A.M., the hæmorrhage recurred more severely than before. From this time until evening there were repeated hæmorrhages; the patient gradually sank, and died at 8, P.M., remaining sensible to the last.

Autopsy.—Both the superscapular and posterior scapular arteries were found to be in a sloughing condition, which was apparently the cause of the last hæmorrhages. The subclavian was ligated about half an inch from its origin. The ligature had come away, and the coats of the artery were ulcerated through. On the cardiac side a slight clot had formed, but on the distal side the clot was larger, firmer, and more perfectly organized.

This case is exceedingly interesting, both on account of the infrequency of the operation and because the man lived so long after its performance—nine days and eight hours; and at one time it really seemed as if he would recover.

Hæmorrhage should be divided into three periods: "primary," occurring within twenty-four hours; "intermediary," between that and the tenth day, caused by sloughing resulting directly from the injury; and "secondary," that which takes place at a later date, from ulceration or other morbid action. There have been various opinions in regard to the period at which hæmorrhage is most likely to occur. Guthrie says from the eighth to the twentieth day; Dupuytren, from the tenth to the twentieth; Henman, from the fifth to the eleventh; Roux, from the sixth to the twentieth; and Macleod, from the fifth to the twenty-fifth—the majority appearing on the fifteenth day after the receipt of the wound.

In field practice, it is often impossible to give the wounded the rest and quiet of mind and body which they require, and by which secondary hæmorrhage would frequently be avoided. Previous debility will also be likely to favor hæmorrhage; as has occurred in many cases in our army, when the men were more or less exhausted by continued diarrhœa.

Hæmorrhage should be controlled by pressure, cold, styptics, ligature of the end of the artery, and, in severe cases, by ligature of the main trunk of the artery.

Tetanus, fortunately, is a very rare complication. Alcock sets the proportion at one in seventy-nine; but in the Crimea, Macleod was only able to discover thirteen cases. I have not been able to find sufficient data to enable me to fix the frequency of its occurrence in our army. Opinions vary in regard to the causes of this dreadful disease; but it is certain that unextracted balls are a prolific cause of its development. In the Indies, heat is considered as the cause; while Dr. Kane gives intense cold as the cause of the great number of cases which occurred among his men.

Romberg sums up his view of the treatment thus:—"The results of treatment amount to this, that whenever tetanus puts on the acute form, no curative proceeding will prevail; whilst in the milder and more tardy forms, the most various remedies have been followed by a cure." Larrey trusted most to opium and camphor, with section of the nerve in cases adapted for it. Opium and chloroform seem, however, to have the greatest amount of evidence in their favor.

I will quote one instance of tetanus from Dr. Macleod's excellent work. "Barker, a private of the 38th Reg't, aged 20, was admitted into the general hospital in camp, June 18th. A ball had penetrated his left thigh at its inner and lower aspect, and lodged. Four days afterwards it was found near the wound, and removed. By the 28th, the wound was looking sloughy, and the discharge was thin and unhealthy. He complained much more about his wound than was usual, and appeared very anxious. On the 30th, I noticed some twitching of the limb as it was being dressed. His bowels were free, but he complained of sleeping little at night. The wound was freely enlarged, and covered with a poultice. He was purged with croton oil and clysters. He grew gradually worse. During the two succeeding days the spasms were very decidedly pronounced over the left side. He described them himself as proceeding in 'flashes' from his wound to the spine, and back again. Touching the limb, and especially the sole of the foot, immediately aroused the most violent spasmodic contractions. His pulse rose to 92, and his respirations to 29 per minute. He did not complain of pain, but was greatly distressed by a thick spit, which clung to his teeth, and which he was always making violent efforts to expel. The left side of the body was almost alone affected, and the spasms drew him diagonally backwards, and to the wounded side. He had no trismus for the first day, but afterwards it became marked. He always said, that he was sure if he could only sleep he would be all right. I brought him under the influence of chloroform, and while its effects continued the spasms were relieved, and certainly the pulse and respirations were reduced in frequency; but as soon as he awoke, all his worst symptoms returned in undiminished vigor. Having seen the

utter futility of chloroform to relieve the spasms permanently, or to arrest the disease, in two former cases at home, where the anæsthetic had been fairly tried, I determined to abandon it and trust to opium. This, with enemas, nourishing food, and local emollient applications, comprehended all the treatment. The symptoms were not abated, except for short intervals, and then only in proportion as sleep was procured. His skin was always covered with an odorous perspiration. The abdomen got distended and hard. The muscles of the back were markedly hard and contracted, particularly on the left side. The left leg was stretched out spasmodically, every muscle defined. The right limb was drawn up, and he lay across the bed. The wound was sloughy, and shreds of fascia escaped with the discharge. The urine became scanty and high colored, and required to be drawn off by the catheter. Eventually he suffered much pain in the left groin and calf of the leg, as well as at the ensiform cartilage. When trying to raise himself on his elbow, on the fifth day of the attack, and seventeenth after admission, he was violently convulsed, so that he was bent greatly backwards; he put his hand to his throat as if choking, and fell back dead. The wound was found to be lined with an ashy slough. The bone was not injured. The fascia lata was much torn, and was pierced and ulcerated at a spot on the anterior and external aspect of the limb, some little distance from the wound. The ball had evidently penetrated to this point. No nerve fibres could be detected near the wound. The parts in the neighborhood were sound. The brain and internal organs were healthy. The lungs were only slightly congested, and viscid mucus was present in the larger tubes. The spinal canal contained a good deal of fluid blood. The cord and its membranes were congested. In the lower cervical and upper dorsal regions, the substance of the cord was varicose—contracted and expanded into a series of knots. There was no other pathological appearance."

I should add, that Sir James M'Gregor affirms that this disease never makes its appearance after the twenty-second day.

We now come to another fearful complication of gun-shot wounds —Gangrene. It is sometimes contagious, and spreads over whole wards and hospitals; but more frequently, I think, it attacks only those whose general standard of health is greatly lowered. The earliest symptom is pain in the part, which sometimes precedes the ulcerative process by a couple of days. As a general thing, the edges of the wound do not swell up, but remain thin while they are undermined. The pain usually continues during the process of destruction. It appears chiefly in the lower extremities, and in wounds whose progress towards cure has been for some time stationary. It seldom burrows far into the intermuscular tissues, but confines its ravages to the surface and circumference of the wound.

In the treatment of gangrene there are two things to be accom-

plished: 1st, to arrest the sloughing process; and 2d, to keep up the general condition of the patient by every possible means. For a local application, the permanganate of potash, or, still better, the concentrated muriatic or nitric acids, will be found the most useful. These applications should be followed by anodyne poultices, as yeast and lupulin—the lupulin for its anodyne properties, and the yeast to aid in the separation of the slough by fermentation. Opium should also be administered freely (internally)—six to eight or ten grains per day. Opium is useful, and in fact necessary, to produce sleep and to allay the pain and nausea. It is also thought to aid in restoring the healthy action through the capillaries. The constitutional treatment should be continued by the administration of tinct. ferri, ♏ xx., or even ♏ xxx., three times daily. Porter is also of much benefit, and two or three pint bottles may be given daily. And milk punch, or, still better, eggnog is almost invaluable; it should be made in the proportion of two thirds milk and one third brandy. In short, the local treatment should be of the strongest destructive character, and the constitutional treatment of the strongest tonic character. There are undoubtedly two kinds of gangrene, but I am inclined to think that they depend entirely upon the constitution of the patient and upon the influences to which he has previously been exposed. There is one highly predisposing cause of gangrene which I do not think is properly appreciated by the greater number of military surgeons, and that is the close proximity of fever and chronic diarrhœa patients to wounded men. I know that it is frequently impossible in military hospitals, where they are crowded for room, and with new cases constantly arriving, to classify wounds and different diseases and keep them separate; but I think it might be done far more than it is, and I am satisfied that the admixture of fever and diarrhœa cases with wounded men exercises a most deleterious influence upon the latter and predisposes their wounds to take on unhealthy action. And I also believe that if these cases were kept separate there would be far less gangrene in our military hospitals.

The notes of the following cases were kindly furnished me by my friend Dr. D. R. Brower, Ass't Surg. U.S.V., who was in charge of the Gangrene Camp at Hampton Hospital, Virginia, from May 22d to June 29th, 1864. During that time he treated one hundred and one (101) cases of gangrene without a single death, and this is a record which I think few men can equal.

Thos. B. Benedict, aged 32, private, Co. D, 7th Conn. Vols., received, on May 10th, a flesh wound of the right thigh from a Minié ball. The wound did excellently well until May 23d, when it began to look gangrenous. Concentrated nitric acid was applied locally, followed by yeast and lupulin poultices. For the first four days there was constant nausea; and as this was not allayed by the internal administration of opium, the stomach was blistered and dress-

ed with morphia. As soon as the system came under the influence of opium the gangrene was arrested. This was June 1st—eight days; but in that time the whole of the external aspect of the thigh had sloughed to the extent of one foot by eight inches. After the gangrene was arrested, the wound was dressed with tannin gr. v. to glycerine ʒ i., and subsequently with glycerine alone. He had all the stimulants he could take—eggnog, milk punch, beef-tea, &c. He progressed well until June 9th, when he had severe hæmorrhage from one of the perforating branches. This was arrested by ligature of the bleeding vessel. He improved well, and was transferred to New York, June 20th, able to walk on crutches.

Nat. Emory, private, Co. H, 7th New Hampshire Vols., aged 23, received, on May 13th, 1864, a flesh wound of the left thigh from a spent Minié ball. Did well till May 30th, when phagedænic sloughing began, and all the constitutional symptoms of gangrene made their appearance. Ol. terebinth. was used as a local application, followed by yeast and lupulin poultices. Opium being contra-indicated, hyoscyamus was used—two grains of the alcoholic extract every four hours. Tonics and stimulants freely. Gangrene was arrested June 13th. Slough extended circularly three inches in diameter. Dr. Brower remarks of this case that the wound was slight and the gangrene slight, but the treatment was not sufficiently powerful.

Geo. Spitler, corporal, Co. K, 76th Penn. Vols., aged 24, received, on May 11th, 1864, a penetrating flesh wound of the left thigh from a Minié ball. Did well until May 30th, when the wound took on phagedænic sloughing. Concentrated muriatic acid, followed by yeast and lupulin poultices, was used. Opium, tonics and stimulants freely. Dose of opium, one grain every three hours. The gangrene was arrested on June 3d.

The following case of acute mortification, which was also under the care of Dr. Brower, may as well be mentioned in this connection.

D. W. Pearson, private, Co. C, 22d South Carolina Reg't, aged 39, received, on June 20th, 1864, a flesh wound of the right tarsus, and also a wound on account of which his right arm was amputated at the middle third on the field. Did well until June 26th, 10, A.M., when the mortification first showed itself in the right foot. The man died at midnight, the entire leg being involved in the destruction. The mortification did *not* attack the stump of the arm. Constitutional condition good. Weight 180 pounds. Always in good health. There was no apparent reason whatever for the mortification. The leg was circumscribed with nitrate of silver, and opiates, tonics and stimulants were given in profusion.

[To be continued.]

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

Feb. 13th.—*Two Cases of Spontaneous Laceration of the Aorta.*—Dr. Ellis showed the specimens.

Case I.—*Rupture of the Arch of the Aorta; separation of the external and middle coats as low as the iliac arteries; Rupture into the left pleural cavity; Hypertrophy of the Heart; Disease of the Kidneys.*—The following account of the case was furnished by Dr. Webber, of Cambridgeport, the attending physician.

The patient was a large, powerful man, 55 years of age, a clergyman, subject to dyspepsia and some hepatic trouble since leaving college. On Jan. 29th, although suffering from what appeared to be rheumatic pain, he preached all day, ate a very hearty supper of indigestible food, rode home in an open sleigh, and was much chilled. On the following day there was an increase of pain in the shoulder and back, but he went out as usual. Immediately after dinner he was seized with pain in the back, extending from the middle of the neck to the waist, so severe that he rolled upon the floor, groaning and crying. When seen by Dr. Webber, shortly afterwards, the pulse was 60, not very strong, but full. The respiration was not affected, except during a paroxysm of pain. The latter extended over towards the left shoulder, and was not accompanied by tenderness. The sounds of the heart were natural, with the exception that they were not quite so strong as usual. Large doses of morphine were administered, with only partial relief. Ether was afterwards inhaled, with the desired result.

On Feb. 1st the patient was more comfortable, though the pain occasionally recurred. During the first three days and nights he did not sleep more than half an hour at one time. There was no appetite, much thirst and frequent vomiting. The pulse did not rise above sixty until the night of the 2d, when it was 74, and attended by some heat of the skin. At this time the pain returned so severely over the lower angle of the scapula, that an eighth of a grain of morphine was injected. In half an hour he was relieved, and slept quietly from 11 to 2 o'clock, when the pain again returned, but disappeared after the use of hot applications, and he slept. Waking at 5 o'clock, he, for the first time, complained of severe pain in front of the chest, extending to that point from the back and shoulders. At 6 o'clock he started up, groaning heavily with each expiration, then fell back dead. There had never been any cardiac symptoms before.

Autopsy at 3, P.M., Feb. 5th.—The left pleural cavity contained about six pints of dark, recently-coagulated blood and some serum. Much blood also lay beneath the costal pleura, on and near the spine. At the point of reflection from the root of the lung to the ribs, was a large ragged opening, upwards of an inch in length, through which the finger was readily passed into the tissues around. Much blood was also effused beneath the pleura on the right side.

The heart was considerably hypertrophied, the left ventricle being quite thick and round. No valvular disease.

Just beyond the left subclavian artery, and apparently involving a

small portion of it, was a ragged ulceration, upwards of an inch in length. From this point the blood had made its way between the external and middle coats as far as the iliac arteries, beyond which the vessels were not examined. Dr. Jackson noticed in one of them an appearance which indicated a re-entrance into the circulation. The blood had also infiltrated the sub-pleural tissue, as described, that of the anterior mediastinum, and in portions of the abdomen, along the spine. The ruptured vessel, though atheromatous, was not excessively so. The left lung was quite small, not congested posteriorly, and evidently compressed, but it still contained air, and presented an appearance different from that seen in cases of pleuritic effusion where the amount of compressing fluid is no larger. There had evidently not been time for that complete expulsion of air usually noticed under similar circumstances. The right lung was congested posteriorly, and was, in other respects, normal. No tubercular matter in either. The *bronchial glands* were considerably enlarged, and converted into calcareous masses.

Liver normal. Gall-bladder distended by bile.

The cortical substance of the *kidneys* was softer and much lighter colored than usual. Portions of that of the left were of a deep red color, as in commencing nephritis. On microscopic examination, the tubuli were found so crowded with granular matter, or minute globules, that no trace of a canal remained.

The mucous membrane of the stomach was of a greyish color, but in other respects normal.

Case II.—*Rupture of the Ascending Aorta; separation of the external and middle coats as low as the renal arteries; Rupture into the Right Auricle; Hypertrophy of the Heart; Disease of the Kidneys.*—The specimen came from a patient of Dr. Minot, an Englishman, aged about 40, who had lived many years at Gibraltar, and was a servant in a gentleman's family. He was very reserved and quiet in his disposition, of temperate habits, and rather delicate health, complaining much of the coldness of the climate. Feb. 1st, 2d and 3d, he complained of some pain in his back, and of not feeling well, but waited on table as usual, at dinner, on the evening of the 3d (Friday). He came down stairs on Saturday, but after breakfast went to bed again, complaining of chilliness, and of some oppression at the epigastrium, which he attributed to "biliousness." He had no fever; tongue not quite clean; complexion muddy; eyes a little yellow; no appetite. Some laxative and diaphoretic medicine acted well. On the 6th, he had some sensation in the epigastrium, which he attempted to describe by saying that "his bile had burst," and which he thought relieved him. That night he was very delirious, getting out of bed, and pulling off his shirt. On Tuesday, the 7th, Dr. M. found him sitting up in bed, looking very ill, but not particularly pale, with a full pulse of 84. He answered questions well. There were no signs of hæmorrhage, no symptoms of any acute disease, and Dr. M. was at a loss to say what was the matter with the man. He was taken to the Mass. Gen. Hospital, where he arrived, much exhausted, at noon. He fell asleep soon after being put into bed, and died, suddenly, at 3, P.M.

The brain was normal.

The lungs did not collapse as readily as usual, but appeared healthy.

Heart very large; universally hypertrophied and dilated. Weight,

probably between two and three pounds. No more accurate statement can be made, as the organ was necessarily weighed with the thoracic aorta and much coagulum attached. The thin edges of the aortic valves had the reticulated appearance so frequently seen, but there was nothing in these or the other valves which could be regarded as morbid.

The pericardial surfaces were pretty firmly united by old reticulated false membrane, in the interstices of the upper part of which was some dark, recently-coagulated blood.

In the posterior part of the aorta was a longitudinal rupture of the internal and middle coats, an inch and a half in length, commencing from a half to three quarters of an inch above the valves. This was filled with a recent coagulum, continuous with one which occupied the space between the separated external and middle coats and the posterior mediastinum. The blood had also forced its way between the external and middle coats as far as the right renal artery, where it had re-entered the natural channel, as it had also done in the thoracic portion, through a transverse laceration three quarters of an inch in length. But the most important laceration through which the blood re-entered the circulation, was in the wall of the right auricle, where there was a slit an inch in length. This established a free communication with the posterior mediastinum and the original rupture in the aorta. There was considerable atheromatous disease of the latter, but it was by no means so marked as in many cases where persons have died from other causes.

Liver considerably congested, so as to present the "nutmeg" appearance.

The cortical substance of the kidneys was much more uniform and dense than usual, while the limits between it and the tubular portion were hardly distinguishable. A microscopic examination showed that the tubuli were enlarged and contained an unusual amount of granular epithelium.

The other organs were sufficiently healthy.

These cases have some peculiar features in common. In both there were marked hypertrophy and disease of the kidneys. This hypertrophy may be regarded as a sufficient cause of the accident, taken in connection with the disease of the arteries. But cases previously reported (Extracts from Records of Boston Society for Med. Improvement, vol. ii., p. 198) show that similar ruptures may occur without the existence of either, and there are innumerable instances of the existence of both lesions without the above results.

The immediate cause of death was probably the rupture, in one case into the pleura, in the other into the right auricle.

Feb. 13th.—*Monstrosity.*— Case reported by Dr. Jackson, who received the specimen from Dr. T. E. Francis, of Brookline, on the 3d inst. "It was a female fœtus, measuring 15½ inches in length, quite plump, and generally well developed. Feet somewhat inclined to varus. Over the upper part of the occiput the membranes of the brain protruded, forming a dark-red flaccid tumor, that must have been nearly as large as the top of the finger. It had been lacerated, and a probe passed readily into the cranial cavity. The brain itself did not seem to be involved in this protrusion. The cranium, having been partially prepared, shows a deficiency of bone at the upper part of

the occiput, and corresponding in size to that of the protruded mass: lower edge thick and rounded. There is also a slight deficiency of bone just behind the occipital foramen. The general form of the cranium is quite peculiar; the very low and retreating forehead reminding one of the Carib, or ancient Peruvian skulls.

The kidneys were greatly enlarged; being distinctly felt before the abdomen was opened, and forming a very prominent, dark-red, fleshy tumor upon each side; on dissecting off the peritoneum and the cellular membrane beneath it, they were found to be quite lobulated, and to contain great numbers of little cysts about the size of mustard seed. One of the organs weighed $5\frac{1}{3}$ oz. (avd.), and measured $4\frac{3}{4}$ in. in length, 3 in. in width, and about $1\frac{1}{4}$ in thickness; the other weighed $5\frac{1}{4}$ oz., and measured $4\frac{1}{4} + 3$ in., and about $1\frac{1}{4}$ in. in thickness. One was cut open, and having been examined microscopically by Dr. Ellis, there were found "healthy tubuli, tubuli of which the contents were granular, and dilated tubuli containing some granular matter. The walls of the cysts were fibrous, and the contents perhaps a little granular." The cysts were not confined to the surface, but extended throughout the whole substance of the organ. The pelvis and infundibula were small but perfectly well marked; and the ureter was easily inflated to near the bladder, where it was cut off. The other kidney was preserved entire, and the pelvis in this also was well marked. The ureters were less than a line in diameter, and the bladder would not have held more than three or four drops of fluid.

The most remarkable circumstance in this case is, that in Dec., 1862, the mother bore a child that almost precisely resembled the one here described, in regard to the form of the cranium, the deficiency of bone, the protrusion of the membranes, the enlarged and encysted kidneys and the varus; and these are the only children she has borne. The case was described in the *Boston Medical and Surgical Journal* (Jan. 1st, 1863), with Dr. Wyman's description of the microscopical appearance of the kidneys, and reference to other cases of congenital encysted disease of these organs. In this first case, however, the ureters were impervious."

The crania and kidneys from both cases were shown by Dr. Jackson.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, FEBRUARY 23, 1865.

Report of the Surgeon-General of Massachusetts for 1864.—This annual document, from the pen of our ever active and zealous Surgeon-General, contains, as usual, much matter of public interest. During the past year he has assumed, in addition to his previous labors, a general superintendence of all the Massachusetts agencies for the relief of our soldiers. Appended to his report, therefore, we find the various reports of the local agents in New York, Philadelphia, Baltimore and Washington, all of which give satisfactory evidence that the welfare of the Massachusetts men within the jurisdiction of each has been assiduously cared for.

The report proper contains lists of all the medical officers who have been commissioned in Massachusetts regiments during the year, or those whose term of service has expired, of those who have been promoted to the grade of Surgeon U. S. Volunteers, and of those whose earthly career has closed during the same time. A roster is also given of all the commissioned medical officers of Massachusetts regiments mustered into the service of the United States since the beginning of the rebellion, by which it appears that nearly three hundred members of our profession have been sent into the field with our State troops.

Due mention is also made of those gentlemen who have rendered volunteer service on sudden emergencies on call from the War Department. Passing over an account of the organization of the State agencies before alluded to, we quote the following expression of opinion on a very important subject which occupies many minds at the present time. In concluding his remarks on these agencies the Surgeon-General says :—

"I venture, however, with all due respect to the opinions and convictions of others, to suggest that, while these agencies should continue to receive the fostering care of the State, and in the exigencies, the support of individuals and organized societies, the munificent and cheerful contributions of the public should take a new direction, viz., that of founding and supporting institutions for those who have been honorably discharged by expiration of term of service, and who from sickness and wounds require the sympathy and consideration to which their sacrifices and honorable service entitle them. The care and maintenance of the families of those who have died in the service of their country, or of those who still remain requiring assistance, should be objects of more systematic action than has yet been taken. In making these suggestions, I am not unmindful how much, in the earlier periods of the war, the government was indebted to the popular aid given it through individuals or organized societies. The people cheerfully pay the heavy taxes imposed upon them by the legislation of Congress for the relief of the sick and wounded, and the Medical Bureau of the regular army, under its present energetic and accomplished head, has proved equal to every emergency, so that while the stream of benevolence must still continue to flow it should take other directions than those filled by the liberality of the general government. The opinion thus entertained is fully endorsed by those surgeons from Massachusetts who have had the energy and forethought to provide for every emergency through the Medical Purveyor of their departments, and the test of whose professional excellence has been their ability to supply those over whom they have had the charge with everything necessary for their comfort from government appropriations. The welfare and comfort of our troops, however, *in transitu* through cities and other points, seem to demand a continuance of the various relief agencies, supported by voluntary contributions, and while there should be no diminution of public interest in the alleviation of the distresses of war, the provision and distribution of sanitary supplies in field, camp or hospital, furnished liberally by the government, should be solely under the direction of the proper officers, who are responsible for their disbursement, and whose demoralization in some cases, would be prevented, had they sooner possessed themselves of the knowledge

necessary for a return of timely requisitions upon the Medical Purveyors of the army."

To the suggestion contained in the first part of the above extract we cordially respond. The Sanitary Commission has already, if we mistake not, taken some steps in this direction. We are not prepared, however, to think that the time has yet come for an entire suspension of its operations in the field or in the military hospitals. Greatly as the resources of the medical department of the army have been increased since the war began, we can hardly conceive of the time when an emergency may not exhaust them, and make the relief which this noble organization affords not only most welcome, but absolutely indispensable. Within a few months we have seen it, at City Point, furnishing daily supplies to large, well-organized hospitals, which the resources of the government did not afford. Shirts, socks, shoes, hats, and numerous other articles, not merely of comfort, but actual necessity, were daily issued to numerous applicants, who, without this source of supply, would have been obliged to do as well as they could without them. Milk punch was daily furnished to numerous patients by the Commission, the stimulant being supplied by the surgeons from government supplies, while the other ingredients were given by the Commission. While, therefore, it is evident that private charity need not be taxed so heavily as at first to meet the wants of our army in this direction, we believe that its efforts should not be at once suspended, and that its activity should only diminish as that of the government increases. We have full confidence in the officers of the Commission. They are of the people, and know what the nation wants. They can have no possible inducement as an organization to thrust themselves unnecessarily between the government and the soldiers. Let the Surgeon-General of the United States declare to the nation that the time has arrived when its kindly offices are no longer required (an announcement which we frankly confess we do not expect), and then, and not until then, in our opinion, will be the time for diverting entirely from the army proper the relief which has during the past four years saved thousands of lives to the country.

Ovarian Extirpations.—Dr. Charles Clay publishes (*Glasgow Medical Journal*, Oct., 1864) a report of his 109th and 110th cases of ovarian extirpation, and gives the following tabular results of all his abdominal operations for the last twenty-two years, *i. e.* from 1842 to 1864:—

Cases from 1842 to 1864.	Number.	Recoveries.	Deaths.
Ovarian extirpations	110	76	34
Cæsarian section	1	0	1
Entire removal of uterus and appendages (being fibroids) through the parietes abdominales	3	1	2
Cutting down upon ovarian tumors (in cases of almost universal adhesions), to reduce their bulk from within, and setting up ulceration where removal was impossible	4	4	0
Cysts tapped and injected with tincture of iodine	6	4	Two filled again.
Total results	124	85	37

It will be here seen, that in my practice of twenty-two years, the recoveries in operations of ovariotomy alone are about seventy per cent.—a result that I cannot but consider flattering. The reader will also observe, that during the above period I have extirpated three fibroid uteri with their appendages entire, through the abdominal parietes, as in ovariotomy. These I believe to be the first operations known of the kind. The first and second operations were in 1844, and the last in January, 1863, and reported in the *London Obstetrical Society's Transactions*, vol. v. I mention these particularly, because Professor Koeberl operated similarly on a fibroid uterus on April 20, 1863, and stated his to be the first operation of the kind in the world; whereas my first and second operations were nineteen years, and my last some months prior to his operation. The fibroid in my last case weighed eleven pounds.—*Amer. Journal of Med. Sciences.*

Existence in the Human Subject of Organs unprovided with Nerves, Lymphatics, or Capillaries.—Prof. Simpson, of Edinburgh, in an article in a recent number of the *Medical Times and Gazette* (Oct. 29, 1864), gives an account of some investigations relative to the structure of the umbilical cord and placenta.

The following are his general conclusions:—

1. The volume of the umbilical cord and fœtal portion of the placenta is formed of nucleated cellular tissue, traversed by the tubes of the umbilical arteries and vein and their numerous placental subdivisions; and the cord and fœtal surface of the placenta are covered by a sheath of serous or seroid membrane.

2. Into the composition of these parts no capillaries, vasa vasorum, lymphatics, nor nerves are found to enter.

3. Hence, in human anatomy, we have these organs, forming a large mass, weighing on an average about two pounds, presenting a type of structure resembling that of some of the inferior zoophytes. And,

4. The human mother and her child, two of the most highly-organized beings in existence, are thus temporarily united together, during the intra-uterine life of the latter, by structures of the lowest zoölogical type.—*Ibid.*

Propagation of Puerperal Fever by Accoucheurs.—M. Grisar has recently brought this subject before the Brussels Academy of Medicine. The following is M. G.'s personal experience. In December, 1842, he delivered a woman with the forceps, who died of puerperal fever on the second day; and between then and the 19th of the following March, 16 out of 64 women delivered by him were attacked by puerperal fever, 11 of the number dying. As he found the disease did not prevail in the practices of other physicians, he came to the conclusion that he had been the means of communicating the contagious principle of the disease, and therefore took every possible precaution. Until the end of 1862, therefore, for twenty years, he did not meet with another case; but at the end of that year he had a fatal one; and between December 5th and January 26th following, of 9 women delivered by him 8 became the subjects of the disease, and of these 4 died. He had taken every precaution as respects ablutions,

clothing, &c., but it was not until after he had suspended practice for a month that the disease ceased to appear among his patients. M. Guerin, commenting upon the above facts, observes that Chomel always called in Baudelocque to his wealthy patients, who, unattached to any maternity, he had found to be the only accoucheur of his day in whose practice puerperal fever did not appear; and more than one practitioner, renowned for his knowledge and talent, has acquired among the public a terrible reputation for the calamities which attended his presence. M. Guerin adds that he himself, as well as various other practitioners, have, during the prevalence of epidemics of puerperal fever, experienced symptoms which could only be explained by the presence of a poisonous miasm, and which may doubtless be transported, notwithstanding ablution, change of clothing, &c. Such persons suffer from general uneasiness, fetid breath, eructations of a peculiar odor, and somewhat loose and strong-smelling stools. They should observe the greatest cleanliness, freely breathe the fresh air, and repeatedly purge themselves. When the fever occurs in their practice, they should make it a solemn duty to abstain for a while from attending other cases.—*Med. News and Library,* from *Med. Times and Gaz.*, Dec. 10, 1864.

Sanitary Condition of Armor-clad Ships.—It would seem, according to the Secretary of the Admiralty, that our now numerous armor-clad ships are to be looked upon as little better than pest-ships, except for temporary purposes; that whatever advantages our fleet may have gained, by armor, in fighting capacity has been lost in health capacity. To save the crews from the more remote contingencies of warfare, they have been exposed to the more immediate dangers of deadly and ever-present disease. Under the old system of naval construction, for one man lost in actual strife several were needlessly lost from disease. Under the present system, while the probabilities of the former source of loss are diminished, those of the latter are believed to be increased immeasurably.

History teaches us that the protection derived from defensive armor in the field of battle was so greatly outweighed by the hindrance to facile motion, that in the end bucklers and mail were done away with, and men put their trust in a better system of offence and greater agility. Is this also to be the history of armor in the navy? At least it must be admitted that there is a close parallel between the sanitary aspects of the question; and that, while casing our ships in armor, we have brought the crews into the same miserable health condition which was peculiar to the mediæval warrior clad cap-a-pie in steel. But can it be that naval science halts so that she is unable to solve the question of ventilation of the between decks of an ironsides? Or is it that she obstinately refuses, in spite of warnings and experience, to give to the question the degree of importance it deserves, and submit it to the same careful consideration which is at all times conceded to the fighting and sailing qualities of a ship? It is permitted to us, in the absence of satisfactory evidence to the contrary, to assume that the latter suggestion is the correct one. We have just grounds to believe that the question of ventilation is not beyond the reach of solution.—*Medical News and Library,* from *London Lancet.*

Hydrophobia in Man.—M. Girard de Cailleux, inspector-general of the different lunatic asylums for the department of the Seine, at one of the last meetings of the Academy of Medicine, read a memoir entitled, "On Rabid Hydrophobia considered as a disease which can spontaneously develop itself in Man under the form of Acute Febrile Delirium," and from which I subjoin the following extracts :—

1. If it be true that rabid hydrophobia is a virulent disease transmissible by inoculation from animals to man, it is equally true that it can develop itself, and does so more frequently than it is believed, spontaneously in man, under the form of acute febrile delirium, so frequent in lunatic asylums.

2. It then affects man in a character which is proper to the species, just as other diseases which manifest themselves among animals take a peculiar character in each species, albeit the peculiar nature of the affection does not lose its identity.

3. The causes which produce rabid hydrophia are—in the first place, a predisposition *sui generis;* and then a multitude of occasional causes, which, by their great variety, often lead into mistake on the true nature of the disease.

4. The similarity of the symptoms, of the progress, of the duration, of the termination, of the structural injuries, between rabid hydrophobia which is communicated, and acute febrile delirium, so often met with in lunatic asylums, establishes in these two affections an identity of nature worthy of the attention of pathologists, and destined to throw new light on such an interesting subject.—*Paris Correspondent of London Lancet.*

Wm. H. Brewer has been appointed Professor of Agriculture, Daniel C. Eaton Professor of Botany, and Addison E. Verrill Professor of Zoölogy, in the Sheffield Scientific School of Yale College.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, February 18th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - - -	51	32	83
Ave. mortality of corresponding weeks for ten years, 1853—1863,	39.7	39.0	78.7
Average corrected to increased population - - - - -	00	00	86.10
Death of persons above 90 - - - - - - - - -	0	1	1

Books and Pamphlets Received.—A Dictionary of Medical Science, &c. By Robley Dunglison, M.D., LL.D., Professor of the Institutes of Medicine, &c., in the Jefferson Medical College of Philadelphia. A new Edition, thoroughly revised, and very greatly modified and augmented. Philadelphia: Blanchard and Lea. 1865.—Transactions of the American Medical Association. Vol. XV.—First Annual Report of the Board of (Mass.) State Charities; to which are added the Reports of the Secretary and the General Agent of the Board.

Died,—In this city, February 15th, Dr. James M. Phipps, aged 47 years.

Deaths in Boston for the week ending Saturday noon, Feb. 18th, 83. Males, 51—Females, 32.—Accident, 1—apoplexy, 1—disease of the brain, 6—burns, 1—cancer, 3—cholera infantum, 1—consumption, 14—convulsions, 1—croup, 4—dropsy, 1—dropsy of the brain, 2—empyema, 1—erysipelas, 1—scarlet fever, 3—typhoid fever, 1—disease of the heart, 3—infantile disease, 6—intemperance, 2—disease of the kidneys, 1—laryngitis, 1—congestion of the lungs, 4—inflammation of the lungs, 5—old age, 2—paralysis, 1—peritonitis, 2—phlebitis, 1—puerperal disease, 1—pyæmia, 1—rheumatism, 1—smallpox, 4—unknown, 6—whooping cough, 2.

Under 5 years of age, 31—between 5 and 20 years, 10—between 20 and 40 years, 20—between 40 and 60 years, 11—above 60 years, 11. Born in the United States, 56—Ireland, 20—other places, 7.

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CONVERGENT STRABISMUS A SYMPTOM AND NOT A PRIMARY AFFECTION.

BY HASKET DERBY, M.D., BOSTON.

[Read before the Boston Society for Medical Improvement, Feb. 13th, 1865, and communicated for the Boston Medical and Surgical Journal.]

J. C., æt. 18, consulted me Dec. 19th of the past year, desiring to be relieved of a cast in the right eye.

It was observed that the patient opened neither eye to its full extent, but kept the lids quite close together, so as to cover up a large portion of the pupil. The right eye converged rather more than 3‴ (three lines), and was found to be inferior in vision to the other, comparing with it numerically as $\frac{1}{2^{1}9}$ to $\frac{2}{3}$. The half-closed lids, of course, materially altered the patient's natural expression.

I have brought up this case in order to draw attention to a fact which my experience shows me to be as yet very little acted upon in this country, namely, that convergent strabismus is, in the very large majority of cases, a symptom rather than a disease; and that operative interference, if not followed by other measures, is very often productive of only temporary relief.

The modern view advanced by Donders, and amply supported by facts, is in brief this: that convergent strabismus occurs generally in eyes of low refractive power, and is itself the legitimate result of the increased effort naturally made by such eyes to adapt themselves to near objects.

We meet in the eye three states of refraction.

1st. *Normal.*—Parallel rays are brought to a focus on the retina without action or effort.

2d. *Increased.*—Owing in general to the length of the eye, parallel rays are brought to a focus before reaching the retina. This condition is known as myopia, and is relieved by the interposition of a concave glass.

3d. *Diminished.*—Owing to the shortness of the eye, parallel rays meet the retina before coming to a focus, and produce an indistinct

image, unless altered in their course either by the interposition of a convex glass, or by an increase in the convexity of the crystalline. This condition is known as over-sight or hypermetropia. Hardly recognized till within six years, it has been found to be even more common than myopia, and to be one of the chief causes of inability to use the eye for any length of time on near objects.

This diminished refraction of the eye then, known as hypermetropia, has been proved to be the most frequent cause of convergent strabismus. Donders found it in more than 77 per cent. of the large number of cases he investigated. He says: "Hypermetropia is the primary anomaly, caused by the structure of and peculiar to the eye; strabismus is the secondary condition, resulting some years after birth."

The explanation is brief. Bearing in mind that in the case of the normal eye distant objects are seen without effort, that is that parallel rays are brought unaided to a union on the retina, the hypermetropic patient is obliged to use a portion of the adaptive power (technically known as the accommodation) in order to accomplish the same result. And as he, under these circumstances, uses a certain amount of his accommodation, and a normal eye does not; so in looking at near objects he must make a proportionately greater effort than the normal eye is obliged to do. He is thus always forced to use an inordinate amount of accommodation, especially great on near objects. Now there is a certain well-established connection between accommodation and convergence of the axes of vision. The greater the convergence, the more accommodation can be brought into play. But, if the convergence be carried beyond a certain point, double vision ensues. This occurs with the hypermetropic patient, who is thus obliged to choose between imperfect vision and squinting in order to evade the double images, and naturally chooses the latter.

It is not of course maintained that strabismus is an inevitable result of this anomaly of refraction, or that it even occurs in the majority of cases. The instinctive tendency to binocular vision is so great, the desire of fusing into one harmonious whole the image formed by each eye so natural, that distinctness and accuracy of perception are made to give way; unless—in the individual case—circumstances be present which either render binocular vision of less account or convergence unusually easy. The limits of this paper allow only a passing allusion to these facts.

It is useless, then, to relieve the deformity without attacking the cause—in other words, neutralizing the hypermetropia by ordering a proper convex glass. The strongest glass with which distant objects are distinctly seen should be selected and worn.

If, on the first trial, no convex glass can be borne, it should be remembered that hypermetropia may be *latent*, that is, present, but effectually disguised by the strain brought to bear on the accommo-

dation. The instillation of atropine paralyzes the latter and exhibits the true state of the refraction.

In the case under consideration, it was found that the patient was able to see distant objects with a convex glass of 18 inch radius. A slightly weaker glass was at first selected, and the internal rectus of the right eye carefully loosened from its insertion in the usual manner. He was directed to commence the use of the glass the same day. Ten days later the internus of the other eye was operated on, and a glass of the full strength given. This he now wears constantly and for all purposes. Both eyes are now opened to the full extent, vision is decidedly improved—as regards the absence of effort and the more natural appearance of things in general, all trace of strabismus has vanished, and the fact that prismatic glasses produce double vision proves that both eyes are now used together. The cure is complete.

This case is but one of several recently operated on and treated in this manner with entire success, and is cited to illustrate the principle involved.

DR. A. R. BECKER'S PRIZE ESSAY ON GUN-SHOT WOUNDS.

[Continued from page 79.]

Chapter III.

Wounds of the Head and Face.

Guthrie has said, with truth, that "injuries of the head affecting the brain are difficult of distinction, doubtful in character, treacherous in their course, and, for the most part, fatal in their results." There is no accident which the surgeon takes charge of with more fear and hesitation; for while in some cases death follows the most trivial injury, in others a vast amount of destruction, and even the removal of brain substance, cause but little disturbance. As Liston says, "no injury of the head is too slight to be despised, or too severe to be despaired of."

The injury inflicted by a ball striking the skull, depends chiefly on the angle at which it strikes, and its velocity. If the angle be very oblique, and the ball somewhat "spent," the injury may be very trivial. Stromeyer asserts that the danger from such a grazing shot arises mostly from pyæmia. Inflammation of the bone following the injury, the veins of the diploe become implicated, and thus pus enters the system. Instances have been related in which the effect of such a grazing shot has been to rupture the vessels between the skull and the dura mater. If the force be greater, the pericranium may be injured to a greater or less extent, in one or other of its tables separately, the fracture of the inner sometimes taking place, while the outer remains to all appearance intact. Lastly, the brain may be injured as well as its case; 1st, by what, as John Bell

says, "we choose to express our ignorance of by calling it a concussion," which may pass away doing little or no harm, or may sooner or later result in encephalic inflammation, and compression from effusion; 2d, by such comminution of the skull as shall cause spicula to be thrown into the brain; and, 3d, by direct perforation.

Macleod relates a case, which occurred at the Alma, to show how completely the skull may be destroyed by a glancing shot, without the scalp being implicated. "A round shot, '*en ricochet*,' struck the scale from an officer's shoulder, and merely grazed his head as it ascended. Death was instantaneous. The scalp was found to be almost uninjured; but so completely smashed was the skull that its fragments rattled within the scalp, as if loose in a bag."

At a stated meeting of the "United States Army Medical and Surgical Society" of Baltimore, Feb. 19th, 1863, Dr. Geo. W. Dare, Act. Ass't Surgeon U.S.A., related a very remarkable case, where a soldier, having received a perforating wound of the skull, lived for *two months*, the ball remaining in the brain during that time. "Corporal G. W. Stone, Co. A, 12th Mass. Reg't, aged 29, wounded at the battle of Fredericksburg, Dec. 12th, 1862, was admitted into the General Hospital Dec. 19th, 1862. His right eye had been destroyed, as he stated, by a glancing shot. The lower lid was slit to a small extent; the eye was suppurating. He did not complain of much pain. The functions of the other eye were not disturbed, but it was observed to be unnaturally prominent. There were no brain symptoms, except some headache. Neither the patient nor the surgeon suspected that the ball remained in. The wound healed kindly, within the ordinary time. After two or three weeks, the man went out habitually on pass, through the city. He continued well, with the exception of an occasional pain over the remaining eye, until Feb. 6th, 1863, when he was found by Dr. D. in bed, having had a chill followed by fever. The fever assumed a continued form, with occasional chilliness. He remained cheerful, sitting up at times, and did not manifest any serious symptoms until the night of Feb. 10th, when he became delirious. The nurse then reported that he had wandered a little during the two preceding nights, but during the day he had appeared perfectly sensible. Feb. 11th, he was found comatose; the left pupil greatly dilated; intelligence not entirely abolished; he would sometimes answer a question, or put out his tongue when ordered; the vesical sphincter had become involuntarily relaxed. Cupping and blistering were employed without benefit. He sank rapidly, and died about 12 o'clock that night.

"An autopsy was held on the following day. Upon removal of the calvaria, the pia mater was found much congested, and a considerable quantity of dark fluid blood escaped from the torcular herophili. When the anterior cerebral lobes were lifted, a Minié ball was seen lying transversely, half embedded in the sphenoid bone, between its greater and lesser alæ, the concave extremity half way between the

crista galli and the sella turcica. A portion of the ball rested against and pressed on the thin inner wall of the left orbit, thus diminishing its capacity, and forcing forwards the eye. The missile had, after passing through the eye, entered the cranium, through the inner wall of the right orbit, at the junction of the sphenoid and ethmoid bones. The ball did not penetrate the dura mater, but remained in contact with, and pressing against it. In consequence of this pressure, ulceration of that membrane resulted, and an abscess formed, extending from the point of contact to the left lateral ventricle, containing several drachms of pus. A few drops of pus, apparently encysted by lymph, were discovered pressing directly the commissure of the optic nerve, which was the probable cause of the extreme dilatation of the pupil. The pons Varolii and the medulla oblongata were found bathed in pus."

I have deferred speaking of wounds of the head causing depression of bone, because I wished, in connection with this subject, to say a few words in regard to the use of the trephine.

In a large proportion of gun-shot wounds of the head, more or less depression of bone is caused. In such a case the question is, what to do. Quesney says, "We should always trephine in wounds of the head caused by firearms, although the skull be not fractured." "All the best practitioners," says Pott, "have always agreed in acknowledging the necessity of perforating the skull, in the case of a severe stroke made on it by gun-shot, upon the appearance of any threatening symptom, even though the bone should not be broken; and very good practice it is." This they would do to relieve compression. But in the first place, we must remember that the brain will often accommodate itself to a considerable amount of depression of bone; and, secondly, that compression caused by the formation of pus consequent to the injury, can rarely if ever be relieved by trephining. The position of the pus cannot be calculated with any degree of accuracy; and few surgeons would care to follow the example of Dupuytren, in his celebrated thrust; fewer still, at the present day, would follow Heister's directions: "Sometimes," he says, "it is impossible to discover the particular part of the cranium which is injured; the patient in the meantime being afflicted with the most urgent and dangerous symptoms. In these cases, it will be necessary to trepan first on the right side, then on the left side of the head, afterwards upon the forehead, and lastly upon the occiput; and so *all around*, until you meet with the seat of the disorder." Moreover, there are numerous instances on record, where men with depressed fractures of the skull from gun-shot wounds have recovered, under circumstances which forbade any attention being paid to them—as on retreats and forced marches. Larrey, Guthrie and Ballingall recount many such instances. And Dease long ago recorded the observation, that "those patients who neglected all precepts, and lived as they pleased, did just as well as those who re-

ceived the utmost attention." Thus it would appear that all the fatigues and privations of rapid movements in the field are less injurious to men with depressed fracture of the skull, than the probing, picking and trephining of the faculty.

If the bone be very deeply depressed, and the patient comatose, with stertorous breathing, slow pulse and dilated pupil, then it will be advisable to use the elevator cautiously, with or without the aid of Hey's saw. Otherwise, it does not seem to me that any operative interference should be attempted. The operation of trephining is in itself too dangerous to be lightly resorted to—certainly not as a prophylactic.

Injury of the skull, followed at a late date by compression, is, perhaps, the most hopeless of all the circumstances in which the trephine can be used; yet it seems that in which it is most properly employed. As John Bell says, "It is plainly an abscess of the brain; and as it is an abscess which cannot burst and relieve itself, though the trepan may fail to relieve the patient, yet without that help he will infallibly die." It is, in fact, in these cases, *un dernier ressort.*

In the examination of gun-shot wounds of the head, the finger forms the best probe, and even that should be used with much caution. If the ball be lodged in the brain, it should, of course, be removed if possible. Any pieces of bone which are detached and lying on the brain, or which have been driven into it, should be removed with the greatest care, to cause as little disturbance as possible. Cold locally, perfect quiet, low diet, and (if dangerous symptoms make their appearance) purgatives, and bleeding freely repeated, will prove the most useful means of treating such cases. The after-treatment is of the utmost importance. Relapses may occur long after the patient is apparently out of danger, and often from comparatively slight causes. Alcoholic stimuli, retained evacuations, and irregularities of food, are perhaps the most prolific causes.

Wounds of the face are chiefly to be regretted on account of the deformity and disfigurement resulting therefrom. The extreme vascularity of the tissues of the face endows them with a vitality which rectifies most injuries with a rapidity truly marvellous; and from their great distensibility the surgeon is enabled to repair loss of tissue, even when this has been very extensive. The face has been wounded in almost every part and direction, and often presents a most ghastly appearance. The upper and lower jaws, respectively, have frequently been, to a greater or less extent, destroyed, and yet speedy recovery follow. At the battle of Antietam, a soldier had both eyes destroyed by one ball, which passed through the bridge of the nose, leaving a clean hole. He suffered but little pain, and made a rapid recovery.

Hæmorrhage is undoubtedly the greatest source of danger in gun-shot wounds of the face; and, from the great difficulty of commanding it, frequently places the patient in imminent danger. Those

who have received a severe face wound, seldom leave the field without sustaining a considerable loss of blood; and secondary hæmorrhage is common when the bones have been fractured. The irregularity and extreme vascularity of the parts render the application of ligatures to the bleeding points difficult; and to be effectual, compresses must be applied with much nicety. In secondary hæmorrhage of the deep branches of the face, ligature of the main artery will generally be necessary.

The branches of the facial nerve are sometimes so much injured in face wounds, either by the ball itself or by spicula of bone, that temporary or even permanent paralysis may ensue.

The greatest care should always be taken to remove the secretions which result from injury of the bones of the face. For if any amount of it should be swallowed, and thus enter the stomach, much constitutional disturbance will follow, and a fever of a low typhoid and very fatal type will be induced.

Fractures of the bones of the face form an exception to the general rule, of removing fragments which are nearly detached. The large supply of blood in this region frequently enables pieces of bone —whose direction is not opposed to a proper union—to resume their full connection, in a manner which would be impossible in other parts under the same relative circumstances.

The curious manner in which balls may be concealed in the bones of the face, and be discharged of their own accord, is shown in an instance which occurred at the Alma, and is related by Macleod. "A round ball had entered close to, but below, the inner canthus of the eye, and being lost was not further thought of. The wound healed, and the patient had almost forgotten the circumstance, when, after suffering slightly from dryness in the nostril, the ball fell from his nose, to his great alarm and astonishment, several months afterwards." This case is singular, from the absence of the fœtid discharge which usually attends such injuries of bones, with a retained ball.

Chapter IV.

Wounds of the Chest, Abdomen and Bladder.

Wounds of the thorax are very apt to occur in battle, when the combatants are at close quarters. This is to be seen during sieges and street fights. Simple contusion of the walls may be caused by a spent ball, or by a ball which has struck some part of a soldier's accoutrements, or some strong object in the pocket, and has thus been prevented from entering. A case occurred in our army some months since, where an officer was knocked down, but without sustaining any injury; and on examination, he found a rifle-ball embedded in his watch. Such an injury, however, may be so severe as to cause hæmoptysis, severe constitutional shock, and internal inflammation, even though not accompanied by fracture. If the ball strike the edge of any metal plates which form part of a soldier's accoutre-

ments, the part so struck may inflict the injury on the internal organs. Macleod quotes a case from the unpublished records of the English Medical Department, of a soldier "who was hit at Sadoolapore by a round shot on the edge of the breast-plate, which was so turned inwards as to fracture the cartilages of the 5th, 6th and 7th ribs, on the left side, close to the sternum. The skin was not wounded. He walked to the rear, and complained but little for two hours, when he was seized with an acute pain in the region of the heart. His pulse became much accelerated, and he grew faint and collapsed. A distinct and sharp bellows sound accompanied the heart's action. He died in seventy-two (72) hours from the receipt of the injury—the pain and dyspnœa, which had been so urgent at first, having abated for some hours before death. The heart was found to have been ruptured to an extent sufficient to allow of the finger being thrust into the left ventricle. The obliquity of the opening had prevented the blood from escaping into the pericardium, which contained about two (2) ounces of dark-colored serum."

It occasionally happens that a ball is arrested between two ribs. I again avail myself of Dr. Macleod's experience for an illustration. A soldier was wounded by "a large conical ball with a broad base, which was much spent when it struck him. It did not force itself into the cavity, but lay wedged between the cartilages of the 2d and 3d ribs, on the left side, about an inch from the sternum. On withdrawing the ball, the cavity of the chest was found to be fairly opened, and the lung was visible as it expanded and contracted. He had a severe attack of pleurisy a few days afterwards. For five weeks the wound continued to suppurate freely. The lung became adherent to the parietes. The patient made a good recovery."

Fragments of shell not unfrequently open the cavity, but spare the lung; while sometimes the reverse happens, the lung being injured without the pleural sac being opened. It is a singular fact connected with wounds of the thorax, that an intercostal artery is seldom opened.

If the heart or great vessels are wounded, death will almost invariably be instantaneous. A remarkable exception to this rule came under the care of Dr. J. M. Carnochan, of New York. Bill Poole, the noted pugilist of that city, received a wound from a pistol in a fray. Dr. Carnochan was satisfied, on examination, that the ball had entered the heart. The patient, however, did well. About a week or ten days after, he was imprudent enough to see some friends, became excited, and very shortly expired. On *post-mortem* examination, the ball was found embedded in the muscular tissue of the heart.

The dangers which attend a penetrating wound of the lung are, primarily, hæmorrhage and collapse, as well as those arising from suffocation, if the bleeding be profuse. Secondarily, from inflammation and its results, exhausting suppuration and exfoliation, and from

the organic diseases that are thereby so apt to be engendered. The collapse which follows these wounds, though dangerous, is the best guarantee for the patient's safety, if not too profound and prolonged.

Balls are well known occasionally to remain embedded in the lung, and become encysted, giving rise to a very slight amount of irritation.

The finger is by far the best probe in examining wounds of the thorax, as in all others, where the wound is not too deep. Fragments of bone and clothing should, of course, be removed with all care; and if the ribs are broken they should be fixed by strips of adhesive plaster, passed from the spine to the sternum, and from above downwards, so as to embrace the wounded side only.

The usual treatment of these cases consists in leaving the wound open, applying light water-dressings, and pursuing, with great vigilance, the antiphlogistic treatment throughout. But in the New York *Medical Times* of Oct. 3d, 1863, pp. 156–7, I find an article by Dr. B. Howard, Ass't Surg. U.S.A., proposing a new treatment, which, if justified by experience, will far surpass the old system. He says: "The custom of leaving the wound open is objectionable, because it affords a means of outflow as fast as the effused blood reaches its level, and thus favors the continuance of *hæmorrhage*. It allows the full force of atmospheric pressure upon the entire surface of the lungs, and thus necessitates *dyspnœa*. It admits continually renewed currents of atmospheric air, ensuring decomposition of the clot in the pleural cavity, with extensive and profuse *suppuration*, of a very fœtid character, while it does not provide for its exit, until after so great an amount has accumulated as to cause it to rise above the level of the wound; and after its partial subsidence by overflow, the wound again ceases to be available.

"Suppose, however, that the wound be perfectly closed, the following will at once appear among the advantages to be gained. 1st, *hæmorrhage* is controlled. At the worst, the amount of blood lost after the operation cannot be more than would suffice to fill up the unoccupied space in the pleural cavity; the elastic clot resulting, furnishing a styptic, par-excellence, for the wounded vessels of the yielding lung. 2d, dyspnœea is immediately relieved, upon removal of the atmospheric pressure, and the restoration of the parts approximately to their normal condition. The enclosed volume of air being absorbed, the lung is again at liberty to expand with its usual freedom, limited only in proportion to the size of the clot, which may happen to be in the pleural cavity. 3d, *Suppuration*, if not prevented, is greatly diminished by shutting out the constantly renewed currents of atmospheric air, and its character is very favorably modified. Indeed, if the wound were closed soon enough, I deem it possible that the slough of the track through the lung, with the limited amount of attendant pus, might be entirely disposed of

by absorption and expectoration. The operation which I practise, is by hermetically sealing, as follows:—All accessible foreign bodies having been removed, introduce the point of a sharp-pointed bistoury, perpendicularly to the surface, just beyond the contused portion, and with a sawing motion pare the entire circumference of the wound, converting it into a simple incised wound, of an elliptical form; dissect away all the injured parts down to the ribs; then bring the edges of the wound together with silver sutures, deeply inserted, and not more than a quarter of an inch apart; secure them by twisting the ends, which are then cut off short, and turned down out of the way. Carefully dry the surface, and with a camel's hair pencil, apply a free coating of collodion over the wound; let it dry, and repeat it at discretion. For greater security, shreds of charpie may now be arranged crosswise over the wound, after the manner of warp and woof; saturate it with collodion, and when dry, repeat the process until the wound is securely cemented over; as a still greater security, a dossil of lint may then be placed over the part, and retained with adhesive straps.

"If there be a tendency to undue heat in the part, it may be kept down with cold affusion; should any loosening of the dressing occur, an additional coating of collodion may be applied. The sutures must not be removed, until healing by *first intention* is complete. Should suppuration occur, so as to occasion distressing dyspnœa, proceed to treat it, in all respects, as a case of empyema, introducing the trochar at the most dependent point, and taking especial care to avoid the admission of air. . . . . In incised or punctured wounds, the paring process is, of course, dispensed with. . . . . .

"Practically, the immediate results have been very remarkable, and, I think, unprecedented. The most painful cases of dyspnœa have been promptly relieved, the patient usually falling into a quiet slumber, in about an hour after the operation. . . . . I have obtained healing by first intention, and removed the sutures, within five (5) days after the operation. . . . . Some cases upon which I operated, were six days in the ambulances, before reaching a General Hospital, part of the road travelled being of the worst description; on the fifth day, all but one of these, so treated, were able to walk comfortably. On their arrival, all the wounds were unfortunately reopened, except where the union was too complete to allow of it, and the usual water dressing was substituted."

This treatment applies to penetrating wounds of the abdomen, as well as to those of the thorax. In fact, Dr. Howard's first experiment was in a case of bayonet wound of the abdomen, "which was followed by the best results."*

The abdominal cavity, from its large surface, and want of bony

* Since the above was written, I have been told by Army Surgeons who had tried the method proposed by Dr. Howard, that they had completely failed in obtaining the good results claimed by him.

protection, is very liable to receive injury in battle. And wounds of this part, are of the most dangerous character.

Contusions by round shot or shell, are among the most severe injuries to which the abdomen is exposed. The solid or hollow viscera may be ruptured thereby, and rapid death follow, with but little external appearance of so grave an accident. And even if not so severe as this, injuries of this sort are not uncommonly followed by extensive sloughing of the abdominal wall. If the amount of inflammation caused by contusion be limited, adhesion will be likely to take place between the parietes and the omentum, or viscera, and thus afford a great safeguard against the effusion of blood or other matters into the peritoneal cavity.

Vomiting and pain in the abdomen are the usual symptoms which contusions of this cavity give rise to. If any internal rupture has taken place, we can do very little to prevent a fatal issue. Otherwise, the treatment should be such as will ward off peritoneal inflammation, which may steal on very insidiously.

Penetrating wounds of the liver, kidneys or spleen are, as a rule, fatal; though many exceptions occur. Wounds of the stomach are also exceedingly fatal. Baudens (Observation iv. p. 12, of his "Clinique") records a remarkable case of recovery, though complicated with severe head injuries. Wounds of the small intestines are said to be much more serious, than those which injure the large.

The wonderful manner in which balls and swords may traverse the abdominal cavity, without wounding any of the viscera, has often been commented upon by military surgeons.

When a ball merely enters an intestine and lodges there, it may sometimes be thrown out by the rectum. Several such cases have been related in the New York *Medical Times*, during the present war.

If a vascular viscus or large artery have been wounded, hæmorrhage to a very serious, and even fatal extent, may take place within the cavity. The mutual pressure of the viscera, however, does much to prevent the former accident; and the slight attachment of the arteries generally enables them to escape.

Early protrusion of the intestine is rare, unless the wound be quite large. It should, of course, be immediately and carefully returned, when it does occur.*

The principal danger attending penetrating wounds of the bladder, arises from the infiltration of urine, either primarily or secondarily. If the bladder be full when struck, rapid death will be almost inevitable, on account of the infiltration of urine into the peritoneum. If, however, the bladder be empty, it becomes a matter of great importance to introduce a gum-elastic catheter, as early as possible, and let it remain, so that no accumulation of urine will be

* The treatment of such cases can only consist in absolute quiet—with the exhibition of opium, if necessary—and in sustaining the powers of life to the utmost. But they are very hopeless cases to treat.

possible. The catheter should be allowed to remain until we have reason to believe that the wound is *thoroughly* closed. It presence will excite but little irritation, unless the neck of the bladder be injured.

If the ball have remained in the bladder, it becomes a matter of consequence to remove it. Balls and pieces of cloth or bone, so retained, have in many instances become the nuclei of calculi; so that the sooner they are removed the better. Demarquey mentions a case in which the nucleus was a piece of shell. Larrey operated, successfully, four days after the introduction of the ball into the bladder. In some cases, where the ball was small, it has been voided with the urine.

A case from one of the battles of the Peninsula, in the year 1862, came under my care (of which, unfortunately, I have lost the notes), where a soldier while stooping over, with his back to the enemy, received a ball about three fourths of an inch to the left of the anus. Upon examination, I found the ball in the bladder, and by merely enlarging the track of the ball, performed the lateral operation of lithotomy. He did excellently well, and was removed to one of the northern hospitals in about three weeks.

[To be continued.]

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

Feb. 13th.—*Fracture of the Occipital Bone by a Bullet; Abscess of the Brain.*—Dr. Warren showed an occipital bone, with a fracture through both tables, caused by a Minié ball. On the inner surface were several fragments which had been driven inwards, with rough spicula, encroaching at least half an inch on the cavity of the cranium; on the outside was an indentation, corresponding in size and shape to the flattened ball, which was also exhibited. The specimen was sent by Dr. Wheeler, of Chelsea, with the following account of the case:—

"A Captain, 35 years of age, belonging to the 35th Regiment of Mass. Volunteers, in a movement with the 9th Army Corps, on the Weldon Railroad, near Petersburg, Va., in action on the 19th day of August (1864), received a wound of the scalp upon the back of the head, by a rifle-ball striking the occipital bone near the apex, and just within the lambdoidal suture of the right side. The immediate effect of the concussion caused him to fall, with a momentary loss of his eye-sight and faintness, but his consciousness was retained; in a few moments he was able to get up, and walked to the rear, where the ball was picked out from its bed under the scalp. No symptoms of compression were present, no fracture was then suspected, and the injury was recorded as a flesh wound. He was transferred to City Point, Va., and from thence to a general hospital near New York city,

where he remained, very comfortable, some eight or ten days. He was then furloughed, and arrived home (near Boston) on the first day of September following. He complained but little of his head, but said that it felt heavy at times, and that his eye-sight was not quite so good as usual, &c. &c. These symptoms did not confine him at home; he walked out, called to see some friends, and also attended in person to some business matters. The wound in the scalp was suppurating moderately, and was looking well. The day he arrived home a fissure and depression of bone were discovered to exist, but as no symptoms of compression or cerebral disturbance were present, it was thought that surgical interference was hardly called for. But about the 7th of September, or some eighteen days after the date of the injury, he complained of a chill, which was followed by fever and pain in the back of the head. In a few hours slight delirium came on, showing the development of active inflammation within the cranium. The delirium, heat and other symptoms became more severe from day to day, finally ending in profound coma, with slight convulsions. He died on the 15th of September, just twenty-five days after the injury."

An autopsy exhibited a fracture of the occipital bone. In addition to the appearances mentioned above, "the dura mater gave signs of active inflammation in a circular spot of about two inches in diameter. It was not lacerated, was quite dark in color, and readily separated from the bone. Just beneath this portion of the membrane was found a well-defined abscess, containing about two ounces of pus, formed in the substance of the brain.

"The history or termination of this case, with but a glance at the bony specimen, will at once suggest the trephine and its early use as the best means to ward off inflammation and its consequences."

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, MARCH 2, 1865.

THE BOARD OF STATE CHARITIES.—In a recent number we called the attention of our readers to one of the causes of mortality in our State Almshouses, and to the inhuman practice of removing sick paupers, when in an unfit condition to leave their beds, from distant places to these institutions. Since then the Annual Report of the Board of State Charities has been published, as well as a special and subsequent report of the same body on the State Almshouse system. This Board was appointed by an act of 1863 "to investigate and supervise the whole system of the public charitable and correctional institutions of the Commonwealth," and was invested also with executive power. The character of the gentlemen appointed to perform these important, laborious and gratuitous services, of whom three were chosen by the Governor with his usual excellent judgment from the medical profession, was such as to ensure a searching and impartial investigation, and these documents, but just published as the first fruits of their labors, confirm the wisdom of the act. As might be expected, therefore, the

abuses, which we endeavored partially to expose in a former article, have been fully investigated by the Commissioners and placed before the Legislature for correction. They recommend that . . . . . "provision be made by law, in the manner above mentioned, for the temporary relief of persons having no settlement in any town, without obliging them to go to the State Almshouse ; that it shall be declared unlawful for any town or city to send a sick person to a State Almshouse or to Rainsford Island, without a previous examination by a physician, who shall certify that the sick person can, in his judgment, be safely transported to the place assigned; and that the Inspectors of State Almshouses be directed to see that the separation of families in their institutions is made no more complete than discipline requires."

It has for years been a vexed question how far the State Alms Institutions are to be considered hospitals, and there can be no doubt that reform and some definite and general system have long been needed in their management. The Commissioners have apparently given much attention to this part of their investigations, and offer the following recommendations, which, we trust, will receive the immediate action of the Legislature.

"There is another class at the almshouses who should have better accommodations than they now have. We refer to the sick. There are three radical defects in the provisions now made for this class. *First*, The rooms occupied by them cannot be properly ventilated; *Second*, There is no kitchen provided exclusively for hospital purposes ; and, *Third*, Their apartments are too closely connected with rooms occupied by the other inmates.

"Such are the peculiar uses of a hospital that it should be entirely disconnected from other buildings. Besides, it should not be so open or exposed to other inmates as the hospitals are at Tewksbury and Bridgewater. In case any epidemic disease should break out, the present accommodations will not allow of that complete isolation which is so necessary for safety. What is needed is a plain, substantial building, one story high, well lighted and ventilated, with a kitchen attached ; and located a short distance from the present almshouse building. A hospital built and furnished in a simple and cheap manner, similar to many now in use by the army, would answer every purpose. Such an arrangement would afford the sick a better chance to recover, and would make the situation of those outside of the hospital better.

"The number of sick at the three almshouse hospitals must have averaged during the past year at least 250. At the present time it is probably much larger, because the number of inmates is much increased during the winter months and the number of the sick increases in nearly the same proportion. It would not be possible to send all these sick persons to Rainsford Island, even if it were desirable, which we greatly doubt. So long as we have almshouses, each must have a hospital connected with it. Let these hospitals, then, be improved, and one of the great objections to the present system would be met. But we ought to go further, and provide that the dangerously ill shall be treated in the towns where they fall sick, instead of being sent off to the State Almshouse, when unfit to be moved, as is now sometimes done.

"Provision should also be made for a medical examination of all sick paupers before they are sent by overseers of the poor to any almshouse or hospital.

"There is another class of persons at the almshouses, viz., the insane, who should have separate accommodations; certainly a large portion of them.

"Their habits are such as wholly unfit them to associate with the rest of the paupers, or even to be where the children can see or hear them. Their wants, also, can be more easily and better supplied in separate apartments.

"Of the expediency of keeping this class of persons at the almshouses at all, there are some doubts, but at present it seems to be necessary to do so. They ought, however, to be better provided for, and to be kept apart, so far as practicable, from the sane inmates.

"Our recommendation of a building for incurable and harmless insane at Tewksbury, was made a year ago, in view of the pressing need of better provision for their comfort, as well as considerations of economy. Such a building would soon save to the State the cost of its erection, and would give the insane a far more comfortable home than they now have. As a temporary expedient we still recommend such a building, but we have already expressed our belief that the permanent interests of the State require something better.

"The number of these insane now at Tewksbury is about 150; at Bridgewater, about 125; in all, not far from 275. This number will naturally increase from year to year, unless the hospitals are left to be filled up with incurable cases.

"The greater the proportion of the insane at the almshouses, the greater will be the inconveniences resulting from their presence there; unless some steps are taken to improve the present arrangement for their care and support. * * * * * * * *

"After providing for the insane and idiotic—the children—those taken ill in the institution and the sick who can be removed thither with comfort and humanity, all which can be done at a trifling expense, and as we believe at an actual saving to the State in future years, the simplest course would appear to be a return to the original intent of the institutions, with such classification as the present buildings will allow.

"Let the almshouses be reserved for the vagrant and friendless class of which we have spoken. Let the work of examination and removal be prosecuted there more vigorously than ever.

"Let overseers of the poor be forbidden by positive enactments. 1st, To send any applicant as a State pauper to a State almshouse or hospital who has any known settlement in the Commonwealth; 2d, To send thither any sick person, except with the certificate of a competent physician that the person is in a proper condition to be moved: 3d, To make any commitment which would break up a household or cause a separation of families, with provision for those exceptional cases of this kind which must of course occur.

"Let one of the institutions be set apart for the reception and treatment of those criminally diseased, who can properly be removed to it; and perhaps, if provision were made for their detention at hard work for a period lengthening with each commitment after the first—a system of labor might be introduced, which, as in other States,

would contribute largely toward the support of the establishment; at any rate, if the reform of these parties be impossible, they would for a time be withheld from doing injury to themselves or others, and compelled to make some remuneration to the community for the expense and loss they have occasioned.

"We believe that these changes, adopted and carried out in good faith, will put an end to the evils complained of, except those necessarily resulting from the aggregation of so much misery in one locality. These can never be wholly removed, but they may be greatly mitigated by the classification already recommended, and the good judgment and ingenuity of the superintendents."

A large portion of the Annual Report of the Board is devoted to the past and present condition of the Rainsford Island Hospital, an institution which has hitherto attracted the attention of the profession on account of the character of some of those who have been connected with its management. A long account of its history is given in the conjoined report of the Secretary of the Board, which certainly exposes great laxity at least on the part of nearly all who have been concerned in the administration of this public charity. We are happy to say, however, in justice to the present superintendent, that it was the unanimous opinion of the Board that the inmates were well cared for, and that two of its members, physicians of long practice, expressed their entire satisfaction with the treatment of the sick, with the exception of the employment of syphilitic inmate nurses. We have not the space to particularize in relation to the proceedings of the Board in this investigation. We can only give their general conclusions and suggestions, which certainly deserve the careful consideration of our profession.

"It will be seen by all who have done us the justice to read the above statement, that our action in the case of this institution was based on careful examinations and undisputed facts. Especial pains were taken to obtain a full knowledge of its past history and present state. The Island was repeatedly visited by different members of the Board, and accurate statistics as to the condition, character, and number of residents there, were collected. It was found that the number of patients requiring hospital treatment was relatively small; that more laborers and assistants were employed on the Island than seemed necessary; that the expenses, generally, of conducting this hospital were high, compared with those of other State institutions, and, as will be seen by referring to the tables in the Report of the Secretary, higher than those of similar hospitals in other States; and that for a long time there had been complaints of excessive, if not extravagant, expenditures at this island.

"It was in view of these facts, and under a deep sense of our responsibility to the State, that this Board proceeded to suggest and apply such remedies as the state of things seemed to demand. That we have only partially succeeded in correcting what we deemed wrong, is not our fault. We have prevented the expenditure of several thousands of dollars needlessly, though obliged to witness the equally needless expenditure of at least eight thousand dollars. For we believe now, as we stated to the Finance Committee of 1864, that $12,000 would have been amply sufficient to maintain an average of sixty-one patients, which is the average number for the calendar year

1864. This would have allowed $3.78 a week for each patient, which certainly is all that ought to have been paid. The actual cost of these patients has been $20,050.70, or $6.32 a week.

"We are satisfied that the appropriations to the support of this hospital are not expended in a way to do the most good. Nor have we any reason to believe that, as the hospital is now managed, there will be any change in this respect for the better. The location of the Island is such as to render communication with it both difficult and expensive, especially in the winter season, and prevents that frequent visitation and watchful oversight on the part of Inspectors and other guardians, which is found so necessary in all our public institutions.

"Again, the buildings at Rainsford Island, with the exception of the Female Hospital, are not well adapted for hospital purposes. The present number of paupers, to say nothing of a larger number, will not, probably, long be comfortably provided for on the Island without heavy expenditures in the erection of new buildings. Then there is comparatively little land on the Island that can be cultivated for garden or other purposes. The establishment can derive no advantages from this source, either by improving the health of its inmates, or from useful articles raised for consumption. Everything consumed on the Island must be bought and conveyed to it, however difficult or expensive may be the means of transportation. On the other hand, the Island is peculiarly adapted for quarantine purposes. Such is its location and isolation as to render it a fit place for the treatment of contagious and infectious diseases, like the yellow fever, the ship-fever and the smallpox.

"An appropriation of five thousand dollars a year would keep the buildings in good order for quarantine purposes, maintain an ample supply of beds for any emergency, and support a small family to reside there, and take care of the property and the patients. We do not offer this as our definite recommendation, but as one of the measures proposed in former years, and worthy of consideration by the Legislature.

"It has been proposed, also, that the sick poor applying for aid in Boston, should be carried to Deer Island, and accommodated in the hospital connected with the city institutions. Here they would be associated with patients of the same grade and character as themselves, and receive the same treatment as the sick paupers of Boston, while the expense at Deer Island would be much less than it has lately been at Rainsford Island. The city of Boston might in this way support all the poor who would by law be sent to Rainsford, for no greater cost than her present proportion of the sums paid by the State at Rainsford.

"Again, it has been proposed to make this hospital an appendage to the Massachusetts General Hospital, to which a class of patients now excluded might be sent; it would also relieve that institution when crowded, and accommodate patients who might be benefited by the sea air. If this were done, the State might arrange to pay so much per week for any patients it might be thought best to send there.

"Another proposition is to make such changes at Rainsford Island as shall secure a small and genuine hospital there; to employ trained nurses, receive none but hospital cases, require the Superintendent to provide for his own household expenses out of his salary, which should

be increased for the purpose; and make provision for a careful oversight of the institution by a board of medical inspectors, whose other duties would not interfere with the inspection of the hospital. There is reason to believe that such a hospital would not cost the State above $12,000 a year, if economically managed.

"Finally, it has been proposed to discontinne the hospital at Rainsford Island entirely, send the sick State paupers to the almshouse hospitals and to Deer Island, and make use of the property at Rainsford for other public purposes.

"Any one of these plans, in our opinion, would be better than the present arrangement, by which the State pays an indefinite sum for the support of an institution which, at best, is a mixture of hospital and almshouse. We commend them all to the consideration of the Legislature, without offering any opinion as to their comparative merits."

Dr. J. B. S. Jackson has withdrawn from the Board of Visiting Physicians of the Massachusetts General Hospital, of which for twenty-five years he has been so valuable and respected a member. In accepting his resignation, at a recent meeting, the Trustees unanimously adopted the following resolution:—

"*Resolved*, That the official services of Dr. Jackson as House Apothecary, Assistant and Admitting Physician, and Visiting Physician in this Hospital, extending, as they do, through a period of thirty-one years, twenty-five of which have been devoted to the important duties of the latter office, deserve and should receive the grateful acknowledgments of the Board and of this community; and in accepting the resignation of his present official position, the Trustees desire to bear their testimony to the punctuality, precision, skill and thorough fidelity with which all its requirements have been discharged, and to extend to him their best wishes for his future health and welfare."

At the last regular meeting of the Trustees, Dr. S. L. Abbot, late Physician to Out-patients, was chosen Visiting Physician to fill the vacancy caused by the resignation of Dr. Jackson, and Dr. J. C. White was elected Physician to Out-patients.

At the annual meeting of the New York State Medical Society, the following resolutions relative to the propriety of medical practitioners advertising their specialty in medical or other journals were passed:

"*Resolved*, That in the opinion of this Society it is impossible to define the limits of medical specialties, either in medical or other journals.

"*Resolved*, That advertisements indicating location and residence, are the utmost limits of self-announcements, consistent with professional dignity; and that all reference to special branches of medical practice, as extra inducements to patronage, should be deemed violations of the Code of Medical Ethics.

"*Resolved*, That hereafter any medical practitioner so offending shall be deemed disqualified as delegate to or for membership of this Society, and if already a delegate to, or a member thereof, shall be deemed a fit subject for discipline.

"*Resolved*, That this Society recommends all Medical Societies in

the State of New York to adopt the foregoing resolutions, with a view to establish the true dignity of our profession.

"*Resolved*, That the foregoing resolutions be transmitted to the American Medical Association at its next meeting, as an expression of the opinion of the Medical Society of the State of New York, and that for this purpose a committee of presentation be appointed."

Massachusetts Medical College.—The Annual Commencement for the conferring of medical degrees will take place at the College on Wednesday, March 8th. The exercises will commence at 11½ o'clock, A.M., with a prayer by Prof. Andrew P. Peabody, D.D., LL.D., after which graduates will read selections from their dissertations. The degrees will then be conferred by the President, Rev. Thomas Hill, D.D., LL.D., who will conclude the exercises with an address.

The Corporation and Board of Overseers of the University will be present on the occasion, and the Fellows of the Massachusetts Medical Society, all medical students, and all persons who may be interested in medical science, are hereby respectfully invited to be present.

George C. Shattuck, M.D.,
Wednesday, March 1, 1865. *Dean of the Medical Faculty.*

Scarlet Fever in the Lower Animals.—It is well known that the lower animals are liable to most, if not all, of the infectious and miasmatic diseases which affect man. The occurrence of scarlet fever in dogs, cats, horses, swine and other animals, is attested by many excellent observers. Many years ago, Heim, of Berlin, reported a case where a dog, after lying in a bed occupied by an infant suffering from scarlet fever, was seized with febrile symptoms, followed by marked desquamation of the skin. Most inoculated three dogs with the fluid taken from the vesicles of scarlet fever. The inoculation was made on the abdomen, where the skin was thin, and not furnished with much hair. At the end of eight days a scarlet eruption appeared on one of the dogs, in patches the size of the hand. This eruption was followed by universal desquamation, and the falling off of the hairs here and there. No difficulty in swallowing was observed. In the memoirs of the Medical Society of St. Petersburgh, the case is recorded of a cat which presented both the characteristic eruption and the throat affection of scarlet fever. A disease corresponding in every respect to scarlet fever is far from uncommon in the horse. It is characterized by fever, a bright scarlet eruption on the Schneiderian membrane and the lining membrane of the mouth, sore-throat, discharge from the nostrils, and enlargement of the parotid glands; and it is followed by loss of hair, and occasionally by dropsy. Numerous references to this disease exist in the journals of veterinary medicine. About a year ago Dr. Letheby reported on the frequent occurrence of scarlet fever among pigs in the city of London. In a letter with which he has favored me on the subject he says: "My attention was directed to it by the remarkable appearance of the skin of the dead animals seized in the city markets; and on inquiry I found that the pigs were attacked very suddenly. They could not eat, as if the throat was bad; and they became very feverish. The skin acquir-

ed an intense red color—deeper than the red shell of a boiled lobster; and the animals died comatose in a few days, and sometimes in a few hours after the attack. I found the kidneys congested; the urine albuminous; and once or twice I observed petechial markings on the valves of the heart. I regarded the disease as a malignant form of scarlet fever."

It would not be difficult to multiply facts like those now referred to; so that there can be but little doubt that scarlet fever, like smallpox, attacks the lower animals as well as man. Indeed it is not impossible, as already suggested, that man may have derived the disease in the first instance from the brute creation; and at all events it is reasonable to hope that researches in the direction now indicated may lead to a discovery productive of as great benefits to the human race as that of vaccination.—Dr. Charles Murchison in *Lond. Lancet.*

Prof. Greene, of Berkshire Medical College, has recently removed an ovarian tumor from a lady in Vermont, weighing 26 lbs., with perfect success, the patient making a good recovery.

A hospital, capable of accommodating 1000 patients, has been organized in Nashville, Tenn., for sick and wounded colored soldiers. It is in charge of Dr. Ira Russell, recently Post Surgeon at Benton Barracks, Mo., and formerly Surgeon of the 11th Mass. Vols.

The smallpox is prevailing in New Haven to quite a serious extent. The disease generally assumes the milder form of varioloid.

The number of births in Hartford, Conn., last year was 758; the number of deaths, 513. Of those deceased, the ages are thus classed:—Under one year, 112; one year to five, 87; five to ten, 26; ten to twenty, 29; twenty to thirty, 68; thirty to forty, 52; forty to fifty, 33; fifty to sixty, 40; sixty to seventy, 36; seventy to eighty, 16; eighty to ninety, 10; ninety to one hundred, 2; age not stated, 2. Seventy-one of the deaths were caused by consumption, and 17 by varioloid and smallpox.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, February 25th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - - -	45	49	94
Ave. mortality of corresponding weeks for ten years, 1853—1863,	41.7	39.8	81.5
Average corrected to increased population - - - - -	00	00	89.16
Death of persons above 90 - - - - - - - -	0	1	1

Married,—At Barnsville, Montgomery Co., Md., Jan. 12th, Dr. E. M. Johnson, of Feeding Hills, Mass., Surgeon of 2d Mass. Cavalry, to Miss Fannie Hempstone, of the former place.

Deaths in Boston for the week ending Saturday noon, Feb. 25th, 94. Males, 45—Females, 49.—Accident, 2—inflammation of the bowels, 1—disease of the brain, 4—bronchitis, 2—cholera infantum, 2—consumption, 12—convulsions, 4—croup, 2—cyanosis, 1—diarrhœa, 1—dropsy, 1—dropsy of the brain, 4—drowned, 1—epilepsy, 1—epistaxis, 1—scarlet fever, 4—gangrene, 1—gastritis, 2—hæmorrhage, 1—disease of the heart, 3—disease of the hip, 1—homicide, 1—infantile disease, 3—jaundice, 1—disease of the kidneys, 3—congestion of the lungs, 2—inflammation of the lungs, 5—marasmus, 1—measles, 1—old age, 5—paralysis, 1—peritonitis, 1—pleurisy, 1—premature birth, 3—puerperal disease, 1—smallpox, 2—teething, 1—tumor, 1—unknown, 7—whooping cough, 3.

Under 5 years of age, 43—between 5 and 20 years, 8—between 20 and 40 years, 17—between 40 and 60 years, 5—above 60 years, 21. Born in the United States, 71—Ireland, 16—other places, 7.

THE

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CASES OF ANEURISM OCCURRING IN YOUNG PEOPLE.

BY W. H. TRIPLETT, M.D., WASHINGTON, D. C.

[Communicated for the Boston Medical and Surgical Journal.]

THE above will appear a very singular announcement when it is remembered how very rare a lesion this is in the young adult, being nearly altogether absent. Of course, I refer to spontaneous aneurism. The causes that conspire to this condition, or upon which aneurism is supposed universally to depend, are fatty and calcareous degenerations of the arterial coats, thereby enfeebling their resistance to the weight and impulse of the blood. The absence of both of these degenerations in early life is no doubt the true cause of its great exemption from this disease. But cases do occur; and when one of these cases is found, do I consider it as a matter of course that fatty degeneration must necessarily be present in the arterial tunics? On the contrary, I do not believe that it does exist. I think there is a more plausible explanation than this. Old age and youth have each a particular enemy—in the former it is "fatty degeneration," unmistakable announcement of reduced vital energy; in the latter it is "inflammation," the excess of vital action, and this abnormal action can soften and spoil arterial tissues, when they become a victim to it, quite as readily as "fatty degeneration." And will any one deny, when aneurism happens in early life, that it was preceded by inflammation? I am much mistaken if they can. Does not inflammation occur in the arterial tunics? Then if it occurs, is it more difficult to conceive it resulting in interstitial softening of the arterial tissues than of the other multifarious textures and organs throughout the economy? The result of this weakening of the walls of the vessel by inflammation is the same as that which has its origin in fatty degeneration, viz., dilatation, more or less extensive according to the degree of injury—this is aneurism. But I believe, though I have never had the opportunity to establish it by dissections, that there will be almost uniformly found this difference in the character of

these dilatations. The tunics spoiled by fatty degeneration, or calcareous deposit, have no elasticity, consequently will not stretch or give, but tear. Through this rent the blood is now poured, and you have what is known as a "sacciform" aneurism; whilst in the former, no special coat suffering complete destruction (though inflammatory action may be more intense in one particular tunic than in the other), but still retaining some tone and tenacity, yet not sufficient to fulfil their office, dilates equally before the pressure and impulse of the blood, creating the cylindroid or tubular aneurism. This is the best and most plausible explanation of the formation of tubular or fusiform aneurism that I can offer, and will account, I think, for its occurrence in youth, several cases of which I have myself observed. The histories of these cases I will proceed to give in detail.

March 10, 1859, I was called to Mary S., daughter of a stone-mason, a young woman of 19 summers, above the common size and of robust appearance; accustomed to hard work. She was carrying a bucket of water up the hill to the house in a great hurry—felt something give way within her, attended with considerable pain, and immediately fainted; was then carried to the house, and placed in bed; has been unable to rise since, from a disposition to faint whenever she makes the attempt. Felt a throbbing in her bowels, with some pain, since the fall; seemed anxious about her condition, and felt as if she were on the eve of dying; did not want to be moved or turned in bed, lying very still upon her back. Said she had felt perfectly well just before the accident.

On examination, I found her with an ordinary, and, as I believed, a natural pulse. The idea of the formation of aneurism occurred to my mind, but she was so young that I thought it impossible, or a circumstance so improbable as to make it unworthy of serious attention. She would not let me press her abdomen (which was very full and rotund) to any extent, desiring me to wait till the next day.

The secretions were normal, and I found nothing in her general condition to give her symptoms importance, or dignify them with danger; and I readily believed she had had some hysterical seizure, from which she had not yet fully recovered. A saline purgative, with a drachm of tinct. valerian, was now ordered her.

On the next day, the medicine not having operated, the dose was repeated. General condition the same. 12th.—The medicine had operated finely, but there was no improvement. I now determined on a critical and thorough examination of the abdominal viscera by palpation. "Don't, Doctor, you hurt me, indeed you do; don't—don't—I feel sick and faint." Thus she remonstrated, though I was conducting my examination as gently as possible. I felt a trembling, undulating, pulsatile movement, and using more force in the vicinity of the umbilicus, my hand was now carried back towards the spinal column, when it was presently arrested by a powerfully pulsating tumor, whose character could not be mistaken, and which I ascer-

tained to be the descending aorta, very much enlarged. This manipulation caused her great distress, and on her crying out with a sudden pang, I desisted.

Auscultation developed aneurismal murmur loud and coarse along the entire track of the abdominal aorta. In a few days I ordered Dr. Hugh Maguire, chirurgical professor at Winchester Medical College, to be sent for, and we saw the case together.

In the course of several months she had lost considerable flesh, so that the abdominal parietes had retreated back upon the vertebral column in close proximity to the aneurismal tumor, whose pulsations, synchronous with the contractions of the left ventricle, could now be distinctly seen at a considerable distance. Its form, size and character were also clearly appreciable. Beginning at the bifurcation of the common iliac, it extended up to the vicinity of the cœliac axis—a uniform, general dilatation of the arterial tube, approximating an inch and a half in diameter, perhaps something more. At one or two points its surface was a little undulating. She had become so extremely impressive to sound and motion as to suffer great pain whenever a heavy foot or a full voice entered her apartment. With this condition there was a constant sense of impending death, so that she would not remain alone even for an instant. Nor could she be induced to make the slightest physical effort, maintaining a constant recumbency, not allowing so much as a pillow under her head, on the ground that it always made her feel worse. It was with the greatest difficulty and at long intervals that she would allow her bedding to be changed, which required the assistance of four or five persons.

Eighteen months later, I saw her again. I found her in the identical position in which I had left her, flat on her back. Her mother informed me that she had had an extensive abscess in her lumbar region some months previously, but was now well of it. She had gained some flesh, and was looking a great deal better than when I had last seen her. Her natural functions appeared to be good, but the tumor had not altered in the least, that I could detect. I have no doubt that there was some erosion of the spine. Said she had not lost sensation nor motion of legs, nor of any region of her body—"that she would try to sit up, but that when she only raised her head a little it beat and hammered so in her bowels that it would make her feel faint and sick, and compel her to lie down again."

It is now nearly six years since the accident; and when last heard from, she was continuing in the same condition.

In the fall of 1860, whilst I was on a visit to Harrisonburg, Va., I was called to see the daughter of a minister—a most remarkable case, and one of great notoriety. She was a most lovely creature—of full size, symmetrical form, black hair and eyes, a high commanding forehead, and a Grecian style of face, the features wearing an expression at once dignified, lofty and commanding, revealing a vim

of mind and intellectual power that gave the lie to all suspicions of hysterical chicanery. But in this particular, I must confess that I am a little sceptical of all women; and remembering the injunctions of Sir Benjamin Brodie and a little experience of my own, I proceeded to a thorough search of her organs on the principle of exclusion. She informed me that she had been a wild, romping girl, and as healthy as one could be, but that one day, when she was 13 years old, she attempted to carry a small tub of water containing her linen collars to another quarter of the room, when she felt a terrible pain in her stomach that made her cry out and let the tub fall. She was assisted to bed, and had been an invalid ever since. She was now 24 years of age. Said she "could sit up, also walk a little, but that it gave her such pains in her back and stomach, and it throbbed and beat so inside of her, that she had immediately to lie down again." "That she felt best when she was propped up in bed, or lying down." I found nothing wrong with this woman's intellect or brain, or spinal marrow, or heart, or lungs, or womb, or kidneys, or any of her organs, till at last forcing my fingers back upon the descending aorta, I discovered it pulsating violently; and yet it might be only a "pulsating aorta"; so following this train of thought, I began to carry my fingers a little higher up, when I suddenly encountered a fusiform expansion, which I ascertained to be about 4 inches in length and 2½ in breadth. It appeared to be an anterior lateral protrusion, and fuller on the left than on the right aspect of the artery. She had never suffered from abscess in this locality. The aneurismal murmur was softer and lower than in the first case, but still very distinct.

Some years ago, I was called to a young man, 18 years of age, by the name of Windle. He had been engaged in building a shed, when suddenly becoming sick, he went to the house and lay down. Three days after this occurrence I saw him. He then was complaining of a bad feeling in his chest, pain between his shoulders, and constant nausea, with uneasy sensations in his bowels. Said that "he had not felt well for several months, and that he was rapidly getting in such a condition that he could hardly do anything without feeling badly afterward." His pulse was excited; and placing my hand over his heart, I felt a peculiar thrill or trembling sensation; and on applying my ear I heard a whirring, purring, double murmur, which increased in intensity as I approached the hypochondrium, where it was exceedingly distinct, and the parts could be seen strongly pulsating synchronous with the movements of the heart. I made an effort to press back the epigaster, but he caught my hand and would not permit it, saying "it hurt him too badly." He had never suffered from inflammatory rheumatism, nor labored under acute pain directly over his heart.

One morning, several months later, he was found dead in his bed, and was buried before I had learned of his demise, or I would have

made a *post-mortem* examination. I firmly believe that he had aneurism, and that it burst and killed him.

February 28th, 1865.

DR. A. R. BECKER'S PRIZE ESSAY ON GUN-SHOT WOUNDS.

[Concluded from page 100.]

Chapter V.

Compound Fractures of the Extremities, Amputations, &c.

Gun-shot fractures of the femur are of very frequent occurrence in battle, and are remarkably dangerous, as compared to fractures, not compound, of the same bone, such as are met with in civil practice. "All the complete fractures of the other bones of the extremities unite, when well managed; by what fatality are those of the femur not equally fortunate? Is it the diameter of the cavity of the bone; the quantity of medullary substance which it contains; the peculiar structure of the vessels which carry the nourishment; the size and force of the muscles which are attached to it, which by their weight and pressure obstruct the passage of the liquids? All these causes united, may combine together and give rise to that want of success which we meet with in treating complete fractures of the femur caused by firearms; but complete fractures of this bone heal very well, whatever cause has produced them, when they are not accompanied by a wound."—(Ravanton, *Chir. d'Armée*, p. 324.)

All the dangerous characteristics of gun-shot fractures have been greatly increased by the conical ball. 1st. The shock it occasions is far greater than that caused by the round ball, merely because the destruction resulting therefrom is much more severe. 2d. The comminution of bone is enormously increased. 3d. The bruising of the soft parts is more extensive; consequently the suppuration is more prolonged, and the chances of purulent absorption so much increased.

There has been a great cry throughout the profession, of late years, for conservative surgery; and this is just and right, and has undoubtedly done much good. But there are many concomitant circumstances in the military practice of surgery which force us to amputate, when in civil practice we might save the limb. And this is especially true in gun-shot wounds of the femur. In the first place, the standard of health and strength is much reduced in those who have for any length of time been subjected to the privations and hardships of campaign life; they live so completely up to their income of health—so to speak—that when any additional drain is made on the system, by a wound or sickness, their strength fails very rapidly. And, in the second place, it is essential to the successful treatment of compound fractures that the patient be sup-

plied with suitable food; that his broken limb be retained, for a certain length of time, immovably fixed in a proper apparatus, and that careful treatment should be continued for a length of time. But how can these things be accomplished in war? Field-hospitals are not overflowing with comforts and conveniences, and the transportation to a general Hospital is often long and tedious—never more so than in the present war. "Thus we foresee," says John Bell, "an argument of necessity, as well as of choice, and that limbs which in happier circumstances might have been preserved, must often in a flying army or dangerous campaign be cut off. It is less dreadful to be dragged along with a neat amputated stump, than with a swollen and fractured limb where the arteries are in constant danger from the splintered bones; and where by the least rude touch of a splinter against some great artery the patient may in a moment lose his life." And Dupuytren says, in one of his clinical lessons, "I have repeated it often, and I repeat it for the last time, after the facts which I have observed, chiefly in 1814, 1815, and 1830, that my opinion on this point is unshaken. In compound fractures from gun-shot, in rejecting amputation, *we lose more lives than we save limbs.*"

According to Macleod, the lower extremity was removed at the *hip* ten times during the Crimean War, in the English army, all primary operations, and all ending rapidly in death. The same author says, "Although making every endeavor, I have only been able to find a record of three cases in which recovery followed a compound fracture in the upper third of the femur, without amputation. . . . . I am certain, however, that although the instances of recoveries were rare, they were yet not so exceptional as recoveries after ampution of the same part. . . . . After the 1st April, 1855, amputation in the upper third of the thigh was performed 39 times, with a fatal result in 34 cases. Of the total number only one was a secondary operation, and it ended fatally. . . . . Amputation in the middle third was performed, during the period after the 1st April, 1855, 65 times, of which 38 died; 56 of these cases, and 31 deaths, were primary operations; 9 cases were operated on at a later period, and 7 died. Amputation was performed on the lower third, during the same period, 60 times, 46 being primary and 14 secondary operations; of the primary, 23 died; and of the secondary, 10." Thus we have 174 amputations in all parts of the thigh, and 115 deaths. It would appear, then, that in gun-shot fractures of the upper third of the femur we should try to *save* the limb; but in a like injury of the middle and lower thirds, primary amputation will be our best course.

As a general rule, I think the circular operation will be found the best in amputations of the thigh; 1st, because by this operation we can remove the limb further from the trunk than by the flap operation; and, 2d, because in transportation we escape the knocking about

and consequent loosening of the heavy flaps, which so frequently occur after the last-named method.

Gun-shot wounds of the leg, fracturing both bones, will generally require amputation; and the sooner it is performed the better. The statistics of the Crimean War, after April 1st, 1855, give 101 amputations of the leg, and 36 deaths resulting therefrom; 89 cases and 28 deaths were primary operations; and 12 cases and 8 deaths, secondary.—(Macleod.)

Where one bone only is fractured, the limb should be saved, even if that one be considerably destroyed, as the other will serve to steady it during the repairing process. When the fracture occurs near the ankle the injury is more severe than when it takes place near the middle of the bone. Resections may sometimes be performed on one or other of the bones of the leg to advantage.

Compound fractures of the upper extremity are not, as a rule, so dangerous as those of the lower, and much greater success will be met with in their treatment. Several causes combine to produce this result, among which the following may be named—the free anastomosis which exists between the vessels, the large supply of blood which they convey, the smaller amount of suppuration, and the less necessity for the patient to keep in a constrained position during recovery.

In the Crimea, after the 1st April, 1855, amputation at the shoulder was performed 39 times, with 13 deaths: 33 cases and 9 deaths were primary operations, and 6 cases and 4 deaths were secondary. Amputation of the upper arm was performed, during the same period, 102 times, with 25 deaths; 96 cases and 22 deaths were primary, and 6 cases and 3 deaths were secondary. The forearm was amputated, during the same time, 59 times, with three deaths; 52 cases and 1 death were primary, and 7 cases and 2 deaths secondary.—(Macleod.) Thus we have 200 amputations of the upper extremity, with 41 deaths.

Resections are particularly applicable to the upper extremity, the arm retaining its full power of motion in many ways, and increasing in power and usefulness with practice.

Wounds of the foot and hand, even of the most severe character, frequently make very good recoveries; and this result should always be aimed at. Even if partial amputation be necessary, we can often contrive to leave the patient a very useful remnant.

The special methods of amputation, and of the treatment of compound fractures, when we try to save a limb, do not require any particular mention in an essay of this size and character.

Chapter VI.

Wounds of Joints; Excision of Joints, &c.

The gravity of gun-shot wounds of the joints depends chiefly on the size and construction of the joint, the extent of the injury, and

the conveniences for careful treatment which may be at hand. The wound of a ginglymoid articulation is generally more severe in its consequences than that of a ball-and-socket joint—principally on account of its more complicated structure. Larrey makes mention of the frequency of tetanus as a consequence of wounds of these joints.

Even when there has been a very great amount of destruction of the articulating extremities of bones, the external wound and appearance may be so trivial as to deceive us in regard to the nature of the wound, and often induce us to delay the prompt and decided measures which are so necessary to ensure recovery.

The hip-joint is so deeply placed, and so much protected by the surrounding parts and its own form, that it is not often penetrated by a ball; but when this does occur the destruction is usually very serious. Alcock lost three out of four cases in which this accident occurred; and in the fourth case, "where recovery took place, the joint itself, there is some reason to suspect, was but remotely affected."

A round ball may occasionally become impacted in the head of the femur, with or without a partial fracture of its neck. It is very difficult, however, to recognize such injuries at first, as there may be neither displacement nor crepitation perceptible. Larrey mentions the case of an officer, wounded in Egypt, who received a ball in the neck of the femur. The wound closed, and twenty years afterwards, on the death of the patient from disease of the chest, the ball was found impacted in the bone.

A penetrating wound of the knee presents an injury of the very gravest description. Macleod says, in referring to wounds of this joint, "I can aver that I have never met with one instance of recovery in which the joint was distinctly opened, and the bones forming it much injured by a ball, unless the limb was removed." A round ball will sometimes penetrate the lower end of the femur, or head of the tibia, without opening the joint, or at least with very slight injury to the capsule, and these cases may recover; moreover, balls may pass close to the capsule, and yet do it no harm, and it is such cases as these which are frequently recorded as recoveries from penetrating wounds of the joint. It is, undoubtedly, often very difficult to determine whether the joint be opened or not, particularly if the ball be a small one. It often happens that the round ball will course around the bones superficially, when it appears to have passed directly through the articulation. We should remember, also, that the swelling of the joint may be caused merely by a bruise, or by the extension of inflammation from some neighboring injury.

When the bones are not much injured a considerable length of time may intervene before severe symptoms set in; and this again may tend to deceive us in regard to the real nature of the injury.

Joint wounds from conical balls, however, are not apt to leave

us in much doubt. They generally crash into and through whatever comes in their way, leaving very distinct marks of their progress.

The danger of these wounds is not immediate, but lies in the long wasting suppuration, the dangerous abscesses which burrow far into the neighboring tissues, and the manifold chances of pyæmia. These abscesses appear among the muscles of the thigh, frequently burrowing along the bone, and stripping it of its covering, and yet are seldom—so far as we can see—in connection with the joints. They are often unnoticed for a long time, and give rise to a great deal of trouble and danger. At a late period of the case, the joint puts on all the appearance of white swelling.

Military surgeons have always acknowledged the necessity of early amputation, where the articulating ends of bones have been fractured by a ball. Esmarch, from the field of Schleswig-Holstein, says, "All gun-shot injuries of the knee-joint, in which the epiphysis of the femur or tibia has been affected, demand immediate amputation of the thigh. It is a rule of deplorable necessity, already given by the best authorities, and which our experience fully confirms." Guthrie has seen no case recover in which the limb was not removed.

Macleod says: "I have often contemplated the laying of the articulation freely open, at an early period in these cases, so as to permit of the extraction of all foreign bodies, and the free escape of the pus which must afterwards be formed, the retention of which is undoubtedly one great source of danger. This might be attempted, even although it were necessary to lay the whole front of the joint open, by an incision similar to that for excision. The joint has been frequently widely laid open by cutting instruments, both primarily, and for disease, and most satisfactory results have been obtained. [*Note.*—At the time the above was written, I had not seen Stromeyer's book, and did not know that the same idea had occurred to him, or that in the only case in which he had practised it, the results had been most encouraging.]"

In July, 1864, while at Hampton Hospital, Va., a case came under my care in which there had been an apparently slight shell wound of the outer side of the left knee. The wound was small and the joint not opened. About two weeks after the receipt of the wound, however, it was found that pus had burrowed into the joint. My own strong desire was to amputate immediately; but upon calling a consultation I was over-ruled, and it was determined—the patient being young and very healthy and robust—to try to save the limb according to Stromeyer's and Macleod's suggestion of laying open the joint. This was done by a free incision on each side of the patella—the limb hung in Smith's anterior splint, and everything done to improve his general condition. The patient did very well until about the eighth day; he then sank very rapidly, and died on the tenth day after the joint was opened.

No better or fairer case could be selected upon which to try this

plan of treatment; but it failed most lamentably, and only served to give more force to the rule that where the knee-joint is opened by a gun-shot wound, either directly or by ulceration, the limb should be *immediately* amputated. If you wait and hope, your patient does well for a little while, and then sinks with such fearful rapidity that no power or science on earth can save him.

If we decide to make the attempt to save the limb, the most rigid antiphlogistic treatment should be enforced; as well as the early evacuation, by free incision, of abscesses, and of matter if it form within the joint. Hectic, with its common accompaniment—diarrhœa—pyæmia and tetanus, are the causes which generally bring death to the relief of the sufferer.

If amputation be decided on, the sooner it is performed the better; for if the operation be deferred, until inflammation and suppuration have been for some time present, the results are very unfavorable.

Shell wounds of the knee are not usually so dangerous as bullet wounds. They frequently merely cut the soft parts open; or, if they injure the bone, they leave a larger aperture, by which the secretions can be more freely discharged. These wounds frequently recover well, with more or less anchylosis.

Macleod has seen only one gun-shot fracture of the patella. The bone was "starred," but the ball did not lodge. The recovery was good, "the motion of the joint being, however, considerably interfered with."

Penetrating wounds of the ankle will generally do well if properly treated, but they require much and long-continued attention. Two things are especially required: 1st, that the articulation be rendered perfectly immovable; and, 2d, that one or other of the wounds be so enlarged as to allow of the free escape of all discharges.

The shoulder-joint, from its more simple mechanism, will, as a rule, suffer less, and from its superficial position will be more manageable when injured than almost any other articulation. Balls sometimes pass very close to the capsule without opening it, or with very slight injury. Larrey tells us that he saved many cases, in which the opening into the joint was not great. If a ball remains impacted in the head of the bone, as sometimes happens with the round ball, it should be removed as soon as possible; as, otherwise, caries of the bone and disease of the joint will be the probable result. Abscesses and fistulous tracks are the concomitants most to be dreaded in penetrating wounds of the shoulder-joint.

Wounds of the elbow are more dangerous than those of the shoulder, on account of the more complex nature of the joint. Excision will be found the best and most satisfactory method of treatment.

We now come to speak of Excision of Joints—a subject very in-

teresting to the military surgeon, on account of the great number of cases in which it can, with propriety, be substituted for amputation; and even, in some instances, holding out a far better hope than the last-named operation.

In the Crimean war, after the 1st April, 1855, excision was performed on

Head of the femur . .	5, primary, of which 1 recovered.
" " " . .	1, secondary, fatal.
Knee-joint . . .	1, " "
Os calcis and part of astragalus	1, recovered.
Os calcis alone . .	1, "
Head of humerus . .	8, primary, 1 death.
" " " . .	5, secondary, no death.
Do. and part of scapula .	1, " fatal.
Elbow-joint, . . .	13, primary, 3 deaths.
" " partial . .	3, no death. (Macleod.)

The same author says: "The shafts of the bones leading from the joints were often too extensively destroyed to enable the injured parts to be removed by excision; in fact, the shafts were so often split, and their periosteal and medullary membranes destroyed, that the resection of the articulation did not suffice to save the limb. Surgeons soon recognized this; but yet it was by no means always easy to determine the true state of things about the joint till the incisions necessary for resection laid bare the bones, and forced the reluctant operator to convert his operation into one of amputation."

Primary excisions will be found much more successful than the secondary, both as regards the final results, and the length of the period of convalescence. Very much depends on the after-treatment; especially in guarding against inflammation.

The shoulder-joint is certainly that to which excision is the most applicable; both from its simple construction, its superficial position, and from the greater readiness (on account of the great vascularity of the surrounding tissues) with which the reparative process is here accomplished.

Guthrie thought the insertion of the deltoid the lowest point at which the bone could be divided, with any prospect of success. But Esmarch has shown, that as much as four and a half inches may be removed from the humerus, and yet a very useful arm remain. Of this fact I know several instances resulting from the present war. Moreover, the report of Esmarch on the practice of Stromeyer and Franke shows us, that to cut across the fibres of the deltoid does not much interfere with its after usefulness; "as its upper edge applied itself to and united with the articular surface of the scapula, and was thus fully attached, and able to raise the arm. The healing was also quicker, as the space to be filled by granulation was much diminished in size, by the application of the muscle to the glenoid fossa."

The fact so clearly demonstrated by Stromeyer, should always be borne in mind when determining on operations at the shoulder-joint; that in comminution of the shaft of a long bone, the fissures never extend into the epiphysis; in the same manner, injuries of the epiphysis, only in very rare cases, extend into the shaft, unless the bullet strikes the adjoining borders of both parts.

It will be found, that in the field we do not require such extensive incisions as in civil practice; and thus, of course, the hope of restored action will be much increased.

One of the chief dangers resulting from excision of the shoulder, lies in the formation of abscesses and sinuses in the neighborhood. To avoid this, we should arrange the line of incision so as to give free exit to the pus; and with this object in view, we shall find Stromeyer's semicircular incision over the posterior surface of the articulation better than any other.

Resection of the elbow has long been known to be far less fatal than amputation. The question now is, how much of the articulating ends of the bones can be removed, consistently with retaining a useful joint? Esmarch thinks that "the less there is removed from the joint ends of the bones, the greater is the probability of anchylosis." But there is considerable diversity of opinion, as to the *greatest* amount of bone which should be removed.

The complete fixture of the joint during the earlier period of treatment, which is so emphatically dwelt on by Stromeyer; its constant support by a splint, even when being dressed; the elevation of it, to prevent œdema, and its flexure at an angle of 130° to 140°, are all points of great importance. Before the wound has wholly cicatrized, passive motion should be attempted; but it must be at once abandoned, if any irritation or sign of inflammation makes its appearance.

Macleod tells us, that so far as he knows, the knee was only excised once in the Crimea, and that patient died from causes unconnected with his wound. Mr. Ferguson thus sums up the advantages which his large experience ascribes to the operation:—"The wound is less than in amputation of the thigh, the bleeding seldom requires more than one or two ligatures, the loss of substance is less, and probably, on that account, there is less shock to the system; the chances of secondary hæmorrhage are scarcely worth notice, as the main artery is left untouched; there is, in short, nothing in the after-consequences more likely to endanger the patient's safety, than after amputation, whilst the prospect of retaining a useful and substantial limb should encourage both patient and surgeon to this practice."

Resection of the hip, though rather a hopeless operation, is still far more hopeful than exarticulation. Thus we see from the returns of the Crimean war—of ten cases of amputation, all died; while in six cases of excision, one recovered. The great danger of these operations lies in the after-treatment. As in all other excisions of

joints, it is very necessary to keep the joint immovable during the early period of treatment, to provide free exit for the pus, which is sure to make its appearance from abcesses and sinuses in the muscles of the thigh, and to guard against inflammation.

I am fully aware that field-hospitals do not contain all the conveniences for treating these cases; but in very many cases, excision gives us a better chance of saving life, than we can hope for from amputation, besides rendering the life, thus saved, very much more comfortable to the patient. And that the life and permanent welfare and comfort of our patients is the principal object of our profession, no one will deny.

ACTION OF WATER ON LEAD.

Until recently the popular creed, professional as well as public, on this subject has been that—

1. Pure or soft waters alone act on lead, and do so in proportion to their purity or softness.

2. A minute proportion of certain neutral salts in water prevents its action on lead.

3. Hence hard or impure waters do not act on lead, and may be safely stored in leaden cisterns and conveyed through leaden pipes.

In 1858, however, Dr. Lander Lindsay, of Perth, laid before the British Association the records of a series of experiments and observations made by himself on this important subject during the previous year. His main or general results were tabulated in the following series of propositions, viz., that—

1. Under certain circumstances pure or soft waters *do not* act on lead.

This was well illustrated by the results of the inquiry instituted in 1854–5 by the Town Council of Glasgow, in connection with the proposed water supply to that city from Loch Katrine. This inquiry cost £5000, and was of the most extensive kind and exhaustive character. It proved *inter alia* that Lock Katrine and other equally pure or soft waters (containing under 2 or 2¼ grs. per gallon of solid matter, with a hardness of 0·6 to 0·8 of Clarke's scale) exerted, under given circumstances, no deleterious action on lead.

2. Hard or impure waters, sometimes containing abundance of the very salts which are generally supposed to be most preservative or protective, *do act* on lead, and with the same rapidity and efficiency as pure or soft waters. This was illustrated by the destruction of lead cisterns, through the erosive action of hard water, in the Murray Royal Institution (an hospital or retreat for the insane of the middle classes), near Perth, of which Dr. Lindsay is the physician. This early destruction of lead first directed his attention to the subject.

3. We are in possession of no satisfactory information anent the

causes of the varying action, under different circumstances, of waters on lead; information, that is, which is of any practical use in assisting either in predicating or preventing lead-erosion or lead contamination.

4. *Experimentation on the small scale,* and for short periods, is most fallacious, and frequently dangerous in regard to the practical conclusions thence to be drawn.

5. Contamination of water, both hard and soft, impure and pure, by lead is, in all parts of the kingdom, and under every variety of circumstances, the cause or source of various obscure diseases of man (and also, doubtless, of the lower animals), of the nature especially of dyspepsia and colic. This proposition was abundantly proved by cases of minor diseases induced by lead-contamination of various of the hard or impure waters of London.

6. So uncertain is the action of water on lead, so impossible is it to predicate the nature or extent of that action under the varying mechanical and chemical conditions of water supply of houses and towns, so difficult is it to prevent the possible dangers, so numerous and excellent are the substitutes that may be provided for lead in the construction of cisterns and pipes, that it is desirable henceforth to *abolish the use of lead as a material for the conveyance or storage of water.*

This *practical* proposition, to which all the others converge or lead, is now being adopted and acted upon by all our most competent and eminent authorities.

The Royal Victoria Military Hospital at Netley, which ought to be the embodiment of all modern progress and discovery in sanitary science and hygiene in their applications to the construction of human dwellings, uses *no lead* in its water cisterns or pipes. A writer in *Good Words* says of this hospital: "The *water supply* has been carefully attended to, and to prevent the possibility of patients suffering from *lead-contamination,* not an atom of that metal has been used in the construction either of the pipes or cisterns. The former are made of block *tin,* and cost £9000. It would be well for the health of the community if in our private houses similar precautions were used.

The Commissioners in Lunacy for Scotland in their regulations anent construction of lunatic asylums, remark in regard to water supply: "It is of the utmost importance that there should be a constant and ample supply of *good water, of which a careful analysis should be made, with a view to determine the proper materials for pipes and reservoirs,* and also in order to ascertain its fitness for the purposes of drinking and washing." The reporters add: "*Lead is an objectionable material for pipes and reservoirs as adulterating the water.*" Dr. Hassall, the "Analytical Commissioner" of the *Lancet,* and the author of the well-known standard work on "Food and its Adulterations," says: "From the number of samples of water I have received containing lead, I am induced to believe that that metal is

more frequently introduced into the system in this way than is commonly suspected. Indeed, so many well-ascertained cases of *lead poisoning*, arising from the use of water contaminated with it, have occurred, that I am of opinion that the *use of lead for the storage and conveyance of water ought to be entirely discarded*, especially in the cases of small towns and single houses."

Again, the late Dr. Dundas Thomson, President of the Metropolitan Association of Medical Officers of Health, who had for many years given, as a chemist, great attention to the subject of water supply, and than whom, on such a subject, there are no more competent authorities, remarks: "*It is impossible too strongly to condemn the use of lead pipes and cisterns. They should never be used for conducting and retaining water for drinking and culinary purposes. It is difficult to understand the origin of the employment of a poisonous metal for domestic use.* But its disuse must depend upon the substitution of the builder or iron pipe fitter for the plumber, who has too long monopolized the manufacture of this noxious form of cistern."

The Americans apparently attribute a greater value to this subject than we do, having devoted a goodly volume to the now bulky evidence *pro* and *con*.

In 1859–60 the great lead and water question was the subject of much public discussion in the columns of the *Times*. The result was a general feeling that the public safety lay in the *abolition of lead in the construction of cisterns and pipes for water supply*—some writers going so far as to recommend a *prohibition by Government* of such use of lead.—*Med. Times and Gazette.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, MARCH 9, 1865.

THREE MORE DEATHS FROM CHLOROFORM.—In the *Medical Times and Gazette* of January 7th we find two more deaths from the use of chloroform reported, although special precautions were taken in administering it. The cases are published by Mr. J. Usher Huxley, House-surgeon to the Devon and Exeter Hospital. We copy the first in full, as follows:—

"W. L., a healthy-looking young man, aged 24, was admitted into the Devon and Exeter Hospital on Sept. 26th, suffering from a severe injury to the right foot. A heavy piece of timber falling on it had fractured the metacarpal bone of the great toe, and deeply lacerated the structures of the inner side and sole. The case went on well, and after the separation of some rather extensive sloughs, healthy granulations filled up the greater part of the chasm. The distal end of the fractured metacarpal bone, however, though evidently dead, remained fixed, and considerably hindered the progress of the wound. The man

was therefore told that he must either be contented to remain in bed several weeks longer while the bone spontaneously separated, or must submit to a slight operation for its removal. He chose the latter, on condition that he might have chloroform. The heart was examined, and nothing being found to contra-indicate the employment of an anæsthetic, his wish was acceded to.

"On November 1, at 10, A.M., the patient was carried to the operating-room. Two of the Hospital surgeons and the House-surgeon were present; three pupils and two nurses were also in attendance. Forty minims (measured) of chloroform were placed in a Snow's portable inhaler, and the inhalation was commenced, the external valve being at first turned aside and afterwards gradually closed. The man breathed calmly and showed no symptoms of annoyance or distress, and in about a minute began to smile, talk, and move his head slightly. The pulse, which was kept throughout, beat quite steadily for from two to three minutes, when it suddenly became imperceptible; there was no congestion or other change of the countenance, the pupils were not dilated, and the breathing was as yet quite natural; the inhaler, to which no fresh charge of chloroform had been added, was, however, immediately removed. In the course of a few seconds the respiration became deep and sobbing, and the tongue was protruded between the teeth; no return of the pulse could be felt. The only approach to spasm or convulsion was that for a few seconds the teeth were firmly clenched; this quickly passed off, and the tongue was again protruded. The time during which the respirations continued, unaided, after the pulse had ceased, may be put down at fully a minute, and not until still later did the face become congested or the pupils dilate.

"The cold douche, ammonia, brandy, galvanism, and forceps for the tongue (as always at this Hospital) were at hand in the operating room. The first was applied directly the pulse was missed, and in the shortest possible space of time brandy was injected into the rectum, solution of ammonia on lint was applied to the nostrils, and galvanic shocks were passed (with due intermission) through the cardiac region, whilst friction was applied to the extremities. The forceps were not needed, as the tongue did not fall back.

"Immediately the breathing began to flag, artificial respiration by the 'Sylvester method' was commenced, and this was steadily carried on for upwards of half an hour. The galvanism was applied at intervals for a like period. No trace of reaction occurred. It should be stated that the inhaler had not been used for any other case that morning, so that it contained absolutely no chloroform but the forty minims.

"*Autopsy six hours after death.*—Body muscular, well nourished. Thorax.—Pericardium natural; surfaces of right pleura everywhere firmly adherent; both lungs healthy in structure, the right more congested than the left. On removing the heart (all its orifices having been previously secured), the ventricles were found firmly contracted and empty; the auricles contained some blood, the right in larger proportion. In these and in the large veins the blood was mostly, but not wholly, uncoagulated. All the valves of the heart were perfectly healthy. The muscular substance was firm, of good color, and without the slightest appearance of fatty or other degeneration. On mi-

croscopical examination, the ultimate fibres were found free from oil-globules, and the striæ were well marked. The walls of the left ventricle were slightly hypertrophied without dilatation. The whole organ, washed free from blood, but with a portion of the large vessels adhering, weighed 14½ ounces. Aorta healthy; no appearance of clots in the pulmonary artery. Abdomen.—Stomach moderately filled with food. Spleen natural; weight 11 ozs. Liver large, congested; weight 5 lbs. 12 ozs. Kidneys, large and much congested; weight—the right, 9¼ ozs., the left, 9¾ ozs. Both liver and kidneys were firm to the knife, and the surface of the sections looked smooth and rather glistening, so that there was a question as to albumenoid (amyloid) degeneration; but there was no semi-transparent, glue-infiltrated appearance of the cut surfaces and edges, and no reaction, characteristic of amyloid change, took place when solution of iodine was applied. Under the microscope, too, both the arteries and cells of the hepatic and renal structures appeared perfectly natural. After being allowed to remain for some hours (covered over to prevent evaporation), it was found that a quantity of blood had drained from the cut surfaces, and that the liver had assumed the ordinary size, while the kidneys were much reduced in bulk. Sections now freshly made showed perfectly natural surfaces. Head (examined last).—The brain and its membranes were perfectly healthy, and not at all congested; blood, however, had probably drained away from the divided veins of the neck. Some urine drawn off from the bladder after the examination contained a trace of albumen, and a flocculent deposit consisting solely of epithelium.

"At the inquest held on this case the jury returned a verdict of 'Homicide by misadventure,' and wholly exculpated the medical officers from blame in the matter."

This case we look upon as of the greatest value in its bearing on the question of the possibility of employing chloroform as an anæsthetic without danger. It could have been hardly possible to take greater precautions in administering it, or to use more faithfully all the means likely to have had any efficacy in the endeavor to rescue the patient from his perilous situation; and yet death followed. The eyes of the profession in Great Britain have been gradually opening to the alarming risk inseparable from the ordinary methods of inhaling this anæsthetic, and the recent report of the chloroform committee will undoubtedly have a good effect in checking its heedless employment, and in inducing greater watchfulness in those who are willing to deal with such a fatal agent. A new inhaler has been recommended, by which a proper dilution of the vapor with fresh air is secured, and the pulse is entrusted to a special guardian during the whole process of inhalation. With such precautions it is thought this anæsthetic may be disarmed of all its dangers. Now let us look at the case before us.

First, the patient was a young, healthy subject, presenting no constitutional contra-indication, so far as could be discovered, to the use of an anæsthetic. Second, the amount of chloroform inhaled was small—only forty minims—and given with great caution from an inhaler, with a due admixture of air with the vapor. Third, the pulse was watched from the first. And yet, without the slightest warning, without any evidence of distress or of cerebral oppression, without

any faltering or weakness of the pulse to give the alarm, it instantly stopped, and did not return. Surely one who is accustomed to employ this agent may well be appalled by such an unlooked-for casualty. Every known precaution taken, a fit subject for the inhalation, instant death without warning!

The case, as we have seen, is most carefully reported. The results of the autopsy are most interesting. It will be observed that the heart, *ultimum moriens* as it has been called, was found "firmly contracted and empty." This condition is very significant when considered in relation to the usually accepted explanation of chloroform deaths. Paralysis of the heart is the commonly received cause of death in these cases. The agent is thought to act with fatal rapidity by destroying the sensibility of this vital centre and thus arresting its action. It is a pretty important matter to determine whether this is the true explanation of these terrible calamities, since upon it depends the theory of treatment. It would seem, in the case before us, that death was caused by *spasm*, not paralysis, of the heart. The organ shut itself up so closely that not a drop of blood could enter it, and maintained its grip until the *rigor mortis* took its place. There were only slight signs of external spasm, the respiration was unobstructed and continued some time after the heart stopped beating, and yet it would not respond to the usual stimulus of the vital current. The blood was found to be mostly fluid. The poison had entered it and destroyed its normal properties, and the principal instrument in its distribution refused to drive it through the system. This deadly effect on the blood which chloroform produces cannot be too greatly emphasized. The mischief is most radical in its nature, and the entire suspension of the inhaling process cannot undo it in time to avert the danger. We are not aware that any investigations have been made to determine whether sulphuric ether produces any poisonous change in the blood when inhaled. Certain it is no instantaneous death has ever occurred under its use, and the symptoms which it causes diminish from the moment it is withdrawn from the patient.

The second case given by Mr. Huxley is not of recent occurrence, and is not so fully reported, but still possesses much interest.

"The following case, which occurred in this Hospital about three years ago, is subjoined as it was not reported in any medical journal nor sent to the Chloroform Committee:—

"R. G., a very healthy-looking man, aged 33, wished to have chloroform to avoid the pain attending cauterization of a sloughing sore on the penis. One drachm of chloroform by measure was placed in the inhaler, and inhalation commenced. The patient soon became very restless, holding his breath, and trying to avoid the vapor (which was, however, much diluted), so that the larger portion of the chloroform was wasted. He was allowed to sit up to spit, and then a second (measured) drachm of chloroform was put into the instrument; but again he grew turbulent, and struggled so violently that it was found difficult to watch the pulse continuously, though every effort was made to do so. Suddenly he sank back motionless, with dilated pupils, and no trace of pulse to be felt. The inhaler was instantly removed from his face, and he continued to draw deep, gasping breaths for half a minute. Cold splashing was applied, and artificial respiration by the 'Marshall Hall method' was resorted to

without the smallest delay. Ammonia was applied to the nostrils, and subsequently a brandy injection was given, while galvanism and friction were assiduously employed. Pressure over the cardiac region (as suggested by Dr. Brown-Séquard in his lectures at the College of Physicians) was also tried. The artificial breathing was afterwards continued by the 'Sylvester method' for upwards of an hour. No sign of returning animation occurred.

"At the *post-mortem* examination, the heart was found to be of a normal size, the ventricles were partially dilated, and both contained fluid blood. There was no valvular disease. The muscular structure was firm, of good color, and without trace of fatty degeneration. The brain, lungs, and abdominal organs were all carefully examined, but no sign of disease was found, nor was there marked congestion of any organ."

In this case, as in the other, the blood was found fluid, but the heart was not so firmly contracted. The ventricles were not, however, widely distended, as we should have expected if paralysis had arrested their action, but partially dilated, as if spasm might have closed them at first, to be partially overcome by the pressure of the *vis a tergo* of the returning blood.

The third case of death from chloroform occurred in the Commercial Hospital, Cincinnati. The patient was a large, corpulent man, apparently healthy. Chloroform was administered to him without producing any unusual effects until after the surgical operation was concluded. While Dr. Wood, who had done the operation, was addressing the medical class—we quote from the *Cincinnati Lancet and Observer*—"he accidentally looked around and saw the man gasp and that he was suffocating; he immediately withdrew the tongue and the man breathed; waiting until he had drawn ten or more inspirations he again turned to the class, remarking that such circumstances were not unusual, and they must always be on their guard for them. After this he again turned his attention to the man, and saw he was not breathing and was dead. Artificial respiration and other means were used, but did no good. When he turned the second time there was no pulse at the wrist, nor could he feel the heart pulsate; he thought the heart ceased beating at the same time with the respiration, and that neither one had precedence of the other. As to the cause of death, the post-mortem reveals nothing, with this exception, that the blood of a person under chloroform is driven from the periphery to the centre, from the meninges to the brain, and that there is great congestion of the nervous system of the head, the blood being driven up to the brain."

In Dr. Taylor's report of the autopsy in this case, made twenty-seven hours after death, it is said that the cavities of the heart were all empty, and the blood was thin, dark-colored, and presenting no coagula. There is good reason then for thinking that in this case, also, death was caused by *spasm* of the heart.

The chloroform in this instance was given in a very unsafe manner, on several folds of muslin, covered with oiled silk, excluding the air as much as possible. It was the usual method of administering this agent in the Commercial Hospital, and chloroform from the same bottle was given with the same apparatus, in the same way, to other patients on the same day, with impunity. It is noticeable that there was

no obstructed respiration by the falling back of the tongue in this instance, or in either of the first two above reported, to which the fatal issue of chloroform cases has been so often attributed.

But we will not pursue this painful subject further. Can any one with his eyes open fail to see, that in spite of the utmost precautions in administering it, with the most careful judgment as to the fitness of the patient for its use, with the purest article that the market affords, anæsthesia from chloroform means imminent danger, deadly peril to the patient?

Massachusetts Medical Society and Regimental Surgeons.—An article under this caption from the *University Medical and Surgical Journal,* has, we see, been copied into other medical journals, and therefore calls for some comment from us. The article states that no candidate for the post of Surgeon or Assistant Surgeon in the Massachusetts regiments will be examined by the Medical Commission of this State unless he is a member of the State Medical Society. The writer then goes on to vent his righteous indignation on this "studied and persistent conspiracy," as he calls it, and declares that in consequence of it our regiments are often supplied with "inexperienced boys and strolling professional vagrants," to the great injury of our soldiers. We have not a word to say in vindication of our regimental Surgeons or Assistant Surgeons; their record is too clear to need any praise from us. We merely wish to say, that there is not a word of truth in the statement. It is false and libellous from beginning to end. No such test has ever been applied to candidates for examination, and a very large proportion of the medical staff of our regiments are *not* members of the Massachusetts Medical Society. A journal which claims for itself so emphatically the attribute of independence, should take special pains not to ignore the truth among the influences it despises; an ignorance, however, we are free to confess, our experience has hitherto shown such journals to be particularly chargeable with.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, March 4th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - - -	37	48	85
Ave. mortality of corresponding weeks for ten years, 1853—1863,	42.3	41.4	83.7
Average corrected to increased population - - - - -	00	00	91.56
Death of persons above 90 - - - - - - - - -	0	1	1

Pamphlets Received.—Ovarian Tumors and their Treatment (excepting ovariotomy). By E. R. Peaslee, M.D., LL.D. Read before the New York Academy of Medicine, March 17th, 1864.—On Ovariotomy: a paper read before the New York Academy of Medicine, June 15th, 1864. By E. R. Peaslee, M.D., LL.D.—Rhode Island Registration Report, 1863.—Report of the Commissioner of Pensions.

Deaths in Boston for the week ending Saturday noon, March 4th, 85. Males, 37—Females, 48.—Abscess, 1—accident, 1—apoplexy, 2—inflammation of the bowels, 1—congestion of the brain, 2—disease of the brain, 3—inflammation of the brain, 1—bronchitis, 3—cancer, 2—consumption, 19—convulsions, 6—croup, 1—debility, 1—diarrhœa, 1—dropsy, 1—dropsy of the brain, 1—dysentery, 1—epilepsy, 1—scarlet fever, 1—typhoid fever, 1—hæmoptysis, 1—disease of the heart, 1—infantile disease, 3—intemperance, 2—disease of the kidneys, 2—congestion of the lungs, 1—inflammation of the lungs, 6—metritis, 1—old age, 3—premature birth, 2—rheumatism, 1—smallpox, 3—syphilis, 1—unknown, 6—whooping cough, 1.

Under 5 years of age, 32—between 5 and 20 years, 9—between 20 and 40 years, 21—between 40 and 60 years, 8—above 60 years, 15. Born in the United States, 60—Ireland, 24—other places, 1.

THE

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NECROSIS OF THE FEMUR.

[Read before the Boston Society for Medical Improvement, Feb. 22d, 1864, and communicated for the Boston Medical and Surgical Journal.]

BY J. MASON WARREN, M.D., BOSTON.

MR. F., 28 years of age, applied to me in February, 1864, on account of a necrosis of the femur, for which he requested to have an amputation performed. When he was 15 years old, he received a shock in the limb by jumping from a wall, which was followed by severe inflammation ending in abscess, which opened at the lower and inner part of the thigh, just above the knee. In the course of a year, abscesses formed along the whole length of the limb, communicating with the bone, some in front and some on the outer side, as high as the trochanter major; through these apertures small bits of bone were occasionally discharged. In the course of the first year, while bearing some weight on the leg, the femur gave way in its lower third, but united again, with shortening of three or four inches, and with a decided bend outwards. During the last eight years he has suffered much at the original site of the disease, the inflammation extending to the knee-joint, which is now nearly stiff. During nearly half of this period of thirteen years he has been confined by successive attacks of inflammation, and he finally decided to submit to an operation by seeing that his future usefulness and comfort were likely to be altogether destroyed. A consultation was held upon the case at the Hospital, which resulted in the decision to remove the limb at the level of the highest fistulous opening, which was at the commencement of the upper third of the femur, and, in case the sequestrum should be found to extend higher, to attempt its forcible extraction by means of forceps, as I had before successfully accomplished in a similar case, where it was important to preserve as long a stump as possible. The exact amount of bone diseased could not be accurately determined, owing to the severe pain and protracted con-

stitutional disturbance which had several times followed the attempt to probe the lower openings in the popliteal region, and which was explained on dissection by the proximity of the sequestrum to the popliteal nerve.

The operation was performed Feb. 27th. A flap was first cut out on the front and outer side of the thigh, having its base at the upper aperture already described, which was placed rather on its inner aspect. An inner and posterior flap was then made, and the bone sawed off just above the point of junction of the flaps, which proved to be in the sound bone, three quarters of an inch above the upper extremity of the sequestrum. This was about four inches long, and lay loosely encased in a cavity in the back and lower portion of the femur, which was open for the most part, but was crossed at about the middle of its length by a bridge of new bone of about half an inch in breadth. The nerve, as above stated, lay directly on it. The sequestrum was so loose that it could have been entirely removed if it had been possible to reach it by any justifiable operation. The knee-joint had been partially disorganized by inflammation, two small surfaces, however, remaining on the condyles still covered by cartilage, each about half an inch in diameter, and corresponding to the articulating surfaces of the tibia, which were concerned in the slight motion remaining. On the curved portion of the bone, in front and opposite to the sequestrum, were marks of the very oblique fracture which had taken place during the first year of the disease. The specimen is now in the Warren Anatomical Museum.

In connection with this case, I have been led to the remark that I have seen very few cases of extensive necrosis of the femur which have been relieved by operation. The records of the Massachusetts General Hospital show the same fact. In one case, a young man, I removed half of the shaft, near its lower extremity, with perfect relief; in another case, of twenty years' duration, which was one of necrosis of the whole length of the shaft of the bone, the operation was followed by so long and exhausting suppuration as to compel the amputation of the limb just below the trochanters, to save the patient's life. Curious to relate, this man afterwards died of an extensive cancer of the stump. In the present case, even if the removal of the dead bone had been practicable, the patient would have been left with a deformed limb, three or four inches shorter than its fellow, and with little or no useful motion of the knee-joint.

It may be interesting to mention that in this case, as is usual where there has been much previous inflammation in the amputated limb, the hæmorrhage from the smaller vessels was very abundant.

The convalescence was slow, and interrupted by a series of abscesses in the stump. Although no exfoliation of bone took place, it was several months before the patient was well enough to return to his home in the country, but with his stump only partially healed. In October, 1864, I saw him in fine health and high spirits, his

stump entirely healed, and having gained thirty or forty pounds of flesh. This increase in weight, as is well known, is not unusual in persons who have submitted to amputation after having gone through with a long suppuration from a diseased limb.

BIRTH OF A CHILD THROUGH A LACERATED PERINÆUM. SPONTANEOUS RECOVERY.

[Communicated for the Boston Medical and Surgical Journal.]

On the 17th of September, 1864, I was called in, on my way to visit another patient, to attend a Mrs. W., who was in labor with her first child. The family were new-comers in the neighborhood, and, being strangers, the messenger despatched for a physician had failed to procure one in season. The pains were quite strong when I arrived, and had been for several hours. These subsided partially as I entered the room. On examination, I found the perinæum very much distended, and through the *thin* integuments I could trace completely the crown of the head. The vertex presented, as usual, externally, although the vulvæ were not as much distended as is customary at this stage of labor. The sphincter ani muscles were also quite lax, and presented a patulous opening to the rectum.

I have noted these conditions in detail, although at the time there was scarcely delay enough in the pains to prepare to support the perinæum, or assist the head in passing through the natural channel, before a strong pain came on, with a simultaneous giving way of the parts—commencing at the anterior border of the anus and extending nearly to the fourchette of the vagina; and through this fissure a child weighing about ten pounds was immediately expelled. The placenta very soon followed, through the same opening. The laceration took place at the first pain after I sat down to the patient, and the delivery was completed in ten minutes after I entered the room.

The mother and child were now cared for, as usual, and I left without informing any one of what had occurred, as nothing could then be done, and I wished to avoid any unnecessary anxiety on the part of the patient. I considered, too, that no particular treatment could be resorted to during the lochial discharge. In two days after, I directed the external application of cloths wet in warm water. These were continued, with injections of warm water, and warm soap and water to keep the parts cleansed. This was the main treatment. I saw the woman occasionally, until the 20th of January last, when the parts were healed, the fæcal and urinal discharges, which had before all passed through the same fissure, then following the natural passages.

The above case being of unusual occurrence, in country practice at least, and in Ramsbotham a lengthy note being made of a similar one, I send it to you for publication if you deem it worthy a place

in your JOURNAL. I do so for the additional reason that it shows how grave a lesion may be mended by the simple recuperative powers of nature, and that such an accident as I have described is not really so formidable as it is generally regarded.

Stanstead, C. E., Feb. 22d, 1865. C. W. COWLES, M.D.

TREATMENT OF TAPE-WORM WITH ELM BARK.

BY J. R. DOWLER, M.D., OF BEARDSTOWN, ILL.

THE subject of this notice is a daughter of Mr. Eb. Fish, of Beardstown, Ill., about six years old. The only point of special interest in the case consists in the efficiency of the remedy—to me perfectly new, and accidentally brought to my notice—which was used in its treatment.

I was treating a little brother of this patient, in the latter part of last July, a part of my prescription for whom was, as a drink, the mucilage of elm bark, made by putting pieces of the solid bark into water. The little girl was seen to be frequently eating portions of the bark during the day; the next morning, upon my visiting the boy, the mother, with much anxiety, showed me a vessel containing something that had passed the little girl's bowels, with bits of the elm bark, enveloped in mucilage, which, upon examination, proved to be about three feet of tape-worm. As I supposed the passage of the worm was accidental, and had occurred simply from the looseness caused by the bark, I proceeded to prescribe what *I* supposed a much more potent anthelmintic—a large dose of turpentine and castor oil. The turpentine and oil were given several times during the three consecutive days, causing pretty active purging, but with no appearance of any portion of the worm. The girl being slender, and of irritable temperament, I was forced to desist from further active medications; and partly to allay irritation of the bowels, and partly to test the influence of the bark on the worm, I directed that she should resume the use of the bark as before, by chewing and swallowing it in moderate quantities.

On visiting my *new* patient the succeeding morning, I was shown portions of the worm, mostly in separate joints, that had been passed over night. Feeling now some confidence in the anthelmintic powers of the elm bark, I directed the continued use of it, in the solid form, as before, while there should be any portions of the worm passing. In my daily calls, for some days, I had the satisfaction to learn that portions of the worm continued to pass each day, and sometimes several times a day.

I now ceased to visit my patient, intending only an occasional call; but my confidence in the efficacy of *elm bark* being so well established, I advised its use to be continued, even for two or three days after any portion of the worm should be seen in the evacua-

tions. The portions of the worm expelled, even the separate joints, were alive, showing more or less motion; a sense of their presence in the rectum, from their action, seemed to urge the patient to go to stool for their removal.

Having given direction for the links or joints to be counted, care was taken by the mother to do so, and from my notes of the case, taken on the 17th of September, 1858, I find that during about seven weeks of the intervening time there had been expelled, by estimate (taking the average lengths of the joints), about 45 feet of the worm. At this time there had been no portions passed for two weeks, during which time the use of the bark had been omitted. The head of the worm, with about fifteen inches of the body attached, had been expelled; but thinking that all portions of the worm or *worms* might not have been removed, I advised that the patient resume the use of the bark. The next day after doing so, further portions came away, among them one about six feet in length, tapering to a thread-like termination.

The next time I took notes of the case was on March 23, 1859, at which time my estimate of the entire length that had been expelled footed up to 135 feet, whether of *one* or more worms I am unable to say, as in the portions I saw there were a head and tail of what I supposed one worm. Since the last estimate there have been joints occasionally evacuated.

The patient when first treated was thin in flesh—had been growing so for some two years—attended with the usual nervous symptoms, startings out of sleep, variable appetite, &c., but with no great departure from good health.

Some time during the autumn of 1863, Charles Wells, a discharged soldier, applied to me for treatment for "fits," as he called his disease, stating that he had been discharged from the service on account of them. He stated that while under treatment for the "fits" by the regimental surgeon, he had discharged some small portions of tape-worm, after which the surgeon treated him actively with the view of removing more of the worm, but without success.

His "fits" (epileptic) continuing to recur frequently, I supposed they might be caused or sustained by unexpelled tape-worm, and being desirous of further testing the powers of the elm bark as an anthelmintic, I at once put him on the use of it, directing him to chew and swallow it in considerable quantities, using the brittle, thick kind of fresh bark, and directing him, in case his bowels should not be relaxed by the bark, to use small doses of oleum ricini to maintain that condition, without any restrictions as to his diet or habits of living. As he resided about eight miles from my place of residence, I requested him to report to me only occasionally.

In about five or six days he called to see me again, stating that on the second day after commencing the use of the bark, portions of worm, mostly in separate joints, commenced coming away, and con-

tinued to do so at nearly every stool, to the time of this report of his case; he having had to use occasionally a little castor oil to promote laxity. I ordered the continuance of the same course while any portions of worm should appear in the evacuations.

Two weeks from his first report he called again, bringing with him about seven feet of worm, tapering in width from about half an inch to a mere thread-like termination. He also stated that there had been daily evacuations of portions of worm, in short pieces, but mostly in separate joints, frequently passing off involuntarily, while walking about, as it appeared by the accumulation of the joints, with the elm mucilage, within the anus. This was the last report he made of his case, as after this he passed beyond my range of observation.

The foregoing, I think, must be accepted as proof that this bland agent possesses properties that make it a very efficient tape-worm-expelling substance.

The mode by which this parasite maintains its position must be by its verminous contraction, and adaptation of its flat surface to the inner surface of the bowels, thus preserving itself from being carried along with their fæcal contents and cast off. That it should maintain its position by the force of *suction*, exerted by the mouth, as some writers have supposed, would seem to be absurd, when the great length of the animal is considered, and the forces in operation tending to its removal. The passage of portions of the worm so promptly on the use of the bark, and the ceasing to do so on its discontinuance—even while active anthelmintics were used—leave no room to doubt its effectiveness in this case, at least, as a worm-expelling agent.

It seems probable that the bark, with its thick mucilage, so interposes between the animal and the inner surface of the bowels as to prevent its lateral grasp on their surface, in consequence of which it is compelled to yield to the forces naturally operating, and is carried out with the discharges. But, as my object was simply to state the practical *facts* in the cases, I will offer no further reflections.—*Chicago Medical Journal.*

THE DIET OF CHILD-BED.

A Lecture by Graily Hewitt, M.D., Physician to the British Lying-in Hospital; Lecturer on Midwifery, &c., at St. Mary's Hospital.

Gentlemen,—The importance of the subject which I now propose to discuss—the dietary proper for a patient during the puerperal state—is, I believe, hardly to be over-estimated. The various accidents and disorders incident to the puerperal state are, as I shall endeavor to show you, very intimately dependent on conditions over which a judiciously contrived dietary exercises a marked control.

The principles which guide us in the selection of remedies for those disorders are identical with those on which we rely in laying down regulations for the diet and regimen of the patient, and in the determination of this question are involved many points of vital interest in the pathology and treatment of puerperal diseases. The "diet" which is best adapted for a woman after parturition is that which will best secure her from becoming affected with the diseases incidental to that period; and no one who has witnessed the terrible rapidity with which these affections not unfrequently overwhelm the unfortunate subjects of them, will be disposed to consider anything unimportant which has a bearing on their prevention.

The subject of the diet of child-bed is one which has been of late forcing itself on professional attention; and I have been long impressed with the necessity for a revision of the rules laid down in the various text-books on midwifery relating to the diet and management of women during the puerperal state, based upon a reconsideration of the correctness of the principles on which those rules have been constructed. On July 9th, 1863, I read a paper on this subject at the annual meeting of the South Midland Branch of the British Medical Association, held at Peterborough. In this paper, which was not at the time published, I expressed very strongly my dissent from the teaching which has been prevalent on the matter in question, and recommended the adoption of rules, as I conceived, more rational, and better adapted to the end we all have in view—namely, the preservation of the puerperal patient from sickness and disease. I have the satisfaction of being able to state that the present respected president of the Obstetrical Society, Dr. Oldham, in his address at the annual meeting of the Society in January, 1864, expressed himself on this very subject in terms almost identical with those used a few months previously by myself at Peterborough.

The text-books most generally in use are those of Dr. Churchill, Dr. Ramsbotham, and Dr. Tyler Smith. The principles laid down in these works in reference to the diet of the patient during child-bed are to be gathered from the following quotations.

Dr. Churchill says, in reference to the diet: "Excess, by inducing feverishness, may retard the convalescence. The patient should be confined to slops—gruel, panada, arrowroot, milk, whey, weak tea, &c.—with bread or toast and butter or biscuit, for five or six days, when the excitement produced by the secretion of milk has subsided; and if there be no counter-indication, she may take some broth, and on the seventh or eighth day, some chicken or a mutton chop, with some wine-and-water." (4th edit., p. 234.)

Dr. Ramsbotham directs that nothing but tea, toast, or farinaceous food be given until the bowels are freely opened. A little beef-tea or broth is then allowed. To this, in a day or two, a light pudding is to be added; "and in a week she may be allowed a small quan-

tity of solid meat." Stimulants of any kind are forbidden, under ordinary circumstances, until near the end of a fortnight. (P. 151.)

Dr. Tyler Smith says that no solid food should be given until after establishment of full secretion of milk and action of the bowels; but he at the same time adds that "cases sometimes occur in which the exhaustion is so great that animal food and stimulus are required from the first." (P. 319.)

From these quotations it is evident that the principle of practice recommended by these standard authorities is one of low diet from the first: Drs. Churchill and Ramsbotham ordering a low diet for as much as a week after labor has taken place; and Dr. Tyler Smith concurring in the principle of low diet as a rule, but admitting the exceptional necessity for deviation from this rule. The practice is, as I hope to show, wrong and unnatural. Nevertheless, the rules which I have mentioned to you are followed by a majority of practitioners. We have so grown up in the practice that it has hardly seemed to be extraordinary that a woman should be allowed little more than gruel, *ad nauseam*, for a week or more after her labor is over.

Why is it that it has been considered necessary to place a woman recently delivered on a low diet? It was thought that the adoption of a low diet was likely to be the means of preventing puerperal accidents and diseases. This is the principle on which these rules are based. Is this principle true? Are known facts in consonance therewith? I believe the principle to be entirely wrong: I am quite sure that facts do not bear it out—nay, that they distinctly contradict it. Let us consider for a moment what is the condition of a woman directly after delivery. The nervous system is much agitated; she is often much exhausted; her muscular system has been exercised powerfully and to an unwonted extent; she has lost a certain quantity, in many cases a considerable quantity, of blood. The rational treatment of a patient presenting such symptoms would be a restorative one: it would involve (first) rest, and, if possible, sleep; and (secondly) the administration of such nourishment as would replace what has been lost; and it is obvious that the patient will require food in proportion to the amount of loss sustained. Further, it must not be forgotten that in many cases the patient, although not giving any obvious external sign of weakness or prostration, is nevertheless in a state very closely approaching to one of exhaustion; and this is particularly observed where the constitution has been undermined by rapidly succeeding pregnancies in women who are insufficiently fed and badly cared for. The rational treatment, then, I would repeat, is to administer food such as will restore what has been lost; and by "food" I understand whatever tends to support and maintain vital power—animal food especially, combined or not, according to circumstances, with liquid containing alcohol.

So far as the condition of the patient immediately after labor is concerned, there would seem to be no reason for depriving her of such food and restoratives as would be administered under circumstances apart from the parturient state altogether, and with the view of alleviating similar symptoms.

But, it is argued, the patient must be kept on a low diet in order to prevent mischief arising, and to ward off certain evils to which she is liable. A low diet will prevent, it is said, the occurrence of what is called "inflammation." Let us consider these various "inflammatory" conditions liable to arise after parturition, with the view of ascertaining how far they are likely to be prevented, or the reverse, by the adoption of a low diet.

1. *Milk fever.*—This is usually described as an affection which comes on about the third day, when the breasts begin to swell, the pulse rises, and there is a feverish heat of the skin, these symptoms subsiding in the course of twenty-four hours, more or less. From what we read in books, we should conclude that this is a common disorder; but the fact is that it is a very rare disease indeed, so much so that an eminent authority, M. Pajot, of Paris, almost doubts the existence of the affection. As bearing on this question, I may mention that out of the last fifty cases which have been under my care in the British Lying-in Hospital there were only two in which the symptoms present had any resemblance to those of "milk fever." This disorder is, you will perceive, ephemeral; no bad effects result from it. And now an important question arises—Would this disease be observed if the patient were well fed? My own experience has led me to the conclusion that milk fever is less likely to occur when the patient is well fed than under the opposite conditions. In the two cases which I have just mentioned as observed recently by myself there was present a markedly defective state of the nutritive functions, and both patients had been, prior to their admission into the hospital, very indifferently fed. I strongly suspect that "milk fever" is in some cases connected with the practice, prevalent with some nurses, of not putting the child to the breast until one or two days after labor. This practice is one which I believe to be highly improper, and one calculated to lead to the production of sore nipples and milk abscess. On this point, however, I do not wish to enlarge at this moment. The point to which I wish particularly to call your attention is, that it is very questionable if a low diet tends in any degree to prevent the occurrence of milk fever.

2. We come next to the more serious puerperal diseases—"*puerperal pertionitis*," *puerperal fever, phlegmasia dolens*, &c. With respect to the pathology of these diseases, there is very much more to be said than can be compressed into the short space now at my disposal, and I can only state those conclusions respecting them which may, as I believe, be made a satisfactory basis for the application of therapeutics. It was formerly considered, and the idea is still pre-

valent to a wide extent, that the essence of these serious puerperal affections was "inflammation." Thus when, two or three days after labor, the patient began to complain of shivering, of pain over the uterine region, when the pulse became frequent, these symptoms were considered to indicate the presence of inflammation of the uterus or of the peritoneum. It is now known, however, although not generally admitted, in the first place, that these symptoms frequently indicate the passage of poisonous material into the blood, really a form of pyæmia; and in the second place, that while mischief of an "inflammatory" kind may be set up in consequence of the introduction of such poison, or in consequence of violence sustained by the uterus during parturition, the best method of combating the inflammation is, not by employing remedies formerly considered anti-inflammatory, such as bleeding, antimony, mercury, administration of low diet, and the like, but by supporting the strength of the patient, and by the exhibition of remedies of a soothing and sustaining nature. So, again, in cases of puerperal fever: the condition actually present is a poisoning of the blood, attended with symptoms of extreme depression, in the prevention and treatment of which low diet and lowering agents of whatever kind are, in my opinion, noxious and injurious in the last degree. In phlegmasia dolens, another accident of the puerperal state, the essence of the disease being erroneously considered to be "inflammation," it was supposed that a low diet would tend to prevent such inflammation. The word "inflammation" has much to answer for in respect to the injurious influence it has exercised on the treatment of puerperal diseases. It is responsible for the low-diet system which has so largely prevailed in the lying-in room—a system which, by weakening the patient, has rendered her liable to become a prey to the poisonous influences by which she may be surrounded, and has induced a mode of treating puerperal diseases calculated to neutralize and negative the efforts Nature will always make to overpower and throw out the subtle agent creating mischief within. In the prevention of puerperal fever, the first thing to do is to prevent contact with septic agents from without; the second, to secure the patient from the operation of septic agencies within. The latter indication is best fulfilled by securing early, good, and permanent contraction of the uterus. A relaxed uterus readily becomes the medium of absorption from the inner surface of the organ through the open extremities of its torn vessels. Perfect contraction of the uterus is, I believe, an almost complete safeguard against introduction of septic matter into the system, and contraction of this kind is best maintained by keeping up the vital powers of the patient, which can only be done by taking care that she is well nourished. Defective contraction of the uterus I have invariably observed to be present at the outset of an attack of puerperal fever.

Modern pathological research has removed phlegmasia dolens from

amongst the affections requiring antiphlogistic treatment and prophylaxis. The substance which fills the hardened vein was formerly believed to be the product of inflammation, but we now know that it results simply from coagulation of the blood. The blood coagulates in the veins; the clot may soften, and become converted into a soft, puriform material, which, though looking like pus, is only broken-down fibrin. Phlegmasia dolens may occur in men as well as in women who have not had children, and it is not unfrequently observed in cases of phthisis. Phthisis is, as we all know, not an inflammatory disease, its distinguishing element being defective nutritive power. It has been shown by Professor Humphrey, of Cambridge, that this tendency to coagulation in the veins, apart from puerperal influences, is associated with a depressed condition of the vital powers, and he has offered abundant clinical evidence of the correctness of this statement. Now, in the case of a woman recently delivered, a depressed condition of the vital powers is very far from uncommon. If the uterus does not contract, an unusual quantity of blood remains in its vessels, and there coagulates. The coagulum spreads upwards by extension, and when it reaches the common iliac vein the circulation in the external iliac vein may become stopped at any moment. Undue loss of blood during or after parturition necessarily depresses the system, and facilitates coagulation in the uterine veins, a tendency still further increased by the circumstance that the uterus in such cases does not contract well. That phlegmasia dolens is more often observed after parturition, in cases where much blood has been lost, is a matter of observation: that it has been noticed to have occurred very frequently in cases where the vital powers have been inadequately sustained by nutritive material will become also evident to those who will take the trouble to inquire into the matter. The evidence to be collected, pathological as well as clinical, is all in favor of the proposition that by a generous diet will the tendency to phlegmasia dolens—supposing it to exist—be likely to be counteracted.

If, for the sake of argument, we admit that these puerperal accidents are inflammatory, the utility of a low diet cannot be maintained in the face of the great alteration which has come over the professional mind in reference to the treatment of inflammation. The practice of bleeding has very largely gone out; mercury and antimony are far less relied on than formerly. There is certainly much doubt as to their efficacy in these cases. The absolute dietary formerly insisted on has equally fallen into disfavor.

It may be urged that I am arguing on theoretical grounds; but I can state, as the result of very careful personal observation, that the conclusions I have enumerated as to the bad effects of the low-diet system in the prevention and treatment of the puerperal diseases alluded to are amply borne out by the facts in my possession. I have also—and this is perhaps more to the point—abundant evidence of the most practical kind of the value of a generous sustain-

ing and supporting diet and regimen, both in cutting short puerperal mischief of the worst kind, and in preventing its occurrence under circumstances most threatening to the patient. What I have seen of puerperal fever and allied disorders has, indeed, induced me to regard with the utmost horror all remedies of a depressing, lowering character. In the treatment of these affections, large quantities of food and brandy, or an equivalent, I have employed most successfully. It is rational to suppose, and it is consistent with my experience, that this gives a clue to the prophylaxis of these diseases. I say nothing of cleanliness, ventilation, separation from contagious influences, &c.; the necessity for these it must be superfluous for me to expatiate upon.

3. *Puerperal mania* is another affection here to be alluded to in connection with the subject of the diet of child-bed. It will be sufficient, perhaps, for me to state in reference to this disease, that a generous diet, with opium in large quantities, and absolute rest, mental and bodily, form the essential elements in the treatment. Here, also, the clue to the prophylaxis is offered by the treatment. The disease generally results from the combined action of excitement and weakness, however induced.

4. *Sudden death during the puerperal state.*—This is an occurrence rare, but of great interest. In the cases which have been investigated the accident has been found to be connected with coagulation in the veins and obstruction to the circulation produced by the coagula in question. This form of death is one of the results of what is now known as "embolism." What I have already said in reference to the circumstances which lead to coagulation within the veins after parturition will enable you to understand why it is to be expected that a low diet will favor the occurrence of this lamentable accident. Apparently the best possible preparation for such a disaster would be to keep the patient on a very low diet, to prevent all motion of the body, thus favoring stagnation of the blood in the great vessels, at the same time neglecting to take precautions to ensure uterine contraction.

5. *Protracted convalescence.*—This is, if not a disease, certainly a great evil. That the observance of a rigidly low diet during the period of lying-in does tend to render the convalescence protracted does not admit of a doubt. This has been forcibly stated by Dr. Oldham in his address to the Obstetrical Society to which I have already alluded. "The precepts laid down in some of the midwifery books," says Dr. Oldham, "for the management of the puerperal state, steadily induce a debility in the first fortnight which requires a drawling convalescence in the second fortnight to overcome.....From first to last elements of weakness and nervous disorder are introduced, and the very diseases are invited which they were designed to remove."

We have now considered *seriatim* the chief of the evils which have

to be prevented or encountered during child-bed, and I think it has been rendered evident that the supposition that a system of low diet is calculated to remedy and prevent these diseases is a mistake. The actual practice of those best informed on these subjects has of late years undergone a very marked change. Dr. Oldham is not alone in his practice of supplying the puerperal patient with food of the best kind and in good quantity from the very moment of her delivery. That the time has come for the adoption, by the profession at large, of a more rational principle of treatment cannot be questioned. And now let me state that the views expressed by the illustrious Denman on the subject of the diet of child-bed are in perfect agreement with those for which I have been contending—namely, the impropriety of depriving the puerperal patient of her ordinary food; but his precepts on this point seem to have almost entirely passed out of professional recollection. Denman says: "After seeing and considering much practice and trying various methods, not only immediately after delivery, but through the course of child-bed, I am fully persuaded that, laying aside all refined speculations, those patients will fare the best and recover most certainly and speedily by whom the least change from their former habits is made. .....The general principle of making as little change as possible from their former habits and customs, either in diet or in any other respect, will best satisfy the expectations of the medical attendant."—(Vol. ii., p. 449.)

What I now advocate is a return to these principles of practice. With reference to the particular diet suitable in different cases it is unnecessary that I should enter into any lengthened detail. It is obvious that the quantity of food must be proportioned to the requirements of the patient; one will require meat once, another two or three times, in the day. As a general rule, Denman's advice to make little change in the ordinary diet should be followed; where, however, the labor has been severe or long, where an unusual quantity of blood has been lost, or where the constitution is weakened by previous illness of any kind, stimulants are, in my opinion, almost imperatively required, unless the patient be able to take animal food, eggs, milk, &c., easily and in good quantity. The exhaustion produced by the labor frequently destroys for a short time the appetite for solid food, and at this period it is necessary to administer nutricious liquid food—milk, soup, beef-tea, eggs beaten up with wine or brandy (and a sufficient quantity of the latter)—in order that ground may not be lost.—*Lancet.*

BARON LIEBIG'S SOUP FOR CHILDREN.

With that remarkable estimation of the greatness of small things which is one of the most valuable of his many high intellectual qualities, and with a tender appreciation of the importance of small peo-

ple, Baron Liebig devotes a special article in an English scientific periodical to the description of a new article of diet which he conceives to be the most fitting substitute for the natural nutriment for those children who are by circumstances robbed of their mother's milk. It is well known that cow's milk does not adequately represent the milk of a healthy woman, and when wheaten flour is added, as it commonly is, Liebig points out that, although starch be not unfitting for the nourishment of the infant, the change of it into sugar in the stomach during digestion imposes an unnecessary labor on the organization, which will be spared it if the starch be beforehand transformed into the soluble forms of sugar and dextrine. This he effects by adding to the wheaten flour a certain quantity of malt. As wheaten flour and malt flour contain less alkali than woman's milk, he supplies this when preparing the soup. This "soup" may be shortly prepared as follows:—"Half an ounce of wheaten flour, and an equal quantity of malt flour, seven grains and a quarter of bicarbonate of potash, and one ounce of water, are to be well mixed; five ounces of cow's milk are then to be added, and the whole put on a gentle fire; when the mixture begins to thicken it is removed from the fire, stirred during five minutes, heated and stirred again till it becomes quite fluid, and finally made to boil. After the separation of the bran by a sieve, it is ready for use. By boiling it for a few minutes it loses all taste of the flour."

The immediate inducement for his making the soup was that one of his grand-children could not be suckled by its mother, and that another required, besides his mother's milk, a more concentrated food. In both cases, as well as in other families where it had been introduced, the soup proved an excellent food, the children thrived perfectly well, and many a petty suffering disappeared after some weeks' use of the soup. He often takes it prepared with ten parts of milk and two parts of malt flour, with tea, for his breakfast. He adds that "Dr. Von Pfeufer, the most renowned physician in Munich, has induced the apothecaries of the town to keep for sale a mixture of half an ounce of malt flour and seven grains and a quarter of bicarbonate of potash, milk and wheat flour being supposed to be in every house. The malt flour ought to be always freshly made from the malt."—*Lancet*, Jan. 7.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, MARCH 16, 1865.

Another Smallpox Epidemic.—It appears from a circular letter, which we presume has been sent to every physician in the city, that an extensive epidemic of smallpox is prevailing among us. In New York, too,

there has been for months an epidemic of the disease so widespread as to cause a general panic, and such a pressing demand for vaccination as to raise the fee for the operation to an exorbitant price. During the last fifteen years there have been four marked and sudden revivals of variolous disease in Boston of one or two years' duration, which have been followed by periods of almost entire extinction. Thus in 1849, there were 21 deaths from smallpox; in 1850 the number increased to 192. In 1853 there were but 6 deaths; in 1854 and the following year, 300. In 1857 and 1858 the number of deaths was only 5; in 1859 and 1860 there were 318. The three succeeding years were comparatively free from the disease, but it has again blazed up and threatens to rage more fiercely than ever, unless checked by the precautionary measures of insulation and prevention which are in the hands of the municipal authorities. This striking alternation of years of pestilence and of exemption illustrates how completely and permanently the disease might be kept in control, did the healthy horror which ensues upon an outbreak survive the immediate effects of the temporary sanitary measures we fly to, but no sooner does it abate, having exhausted the supply of unprotected material upon which it feeds, than we relapse into our former state of childish negligence. There can be no doubt that the present statutes relative to the management of this disease, which are affixed to the circular of the City Physician, are wholly inadequate and virtually a dead letter. Smallpox can never be exterminated by fines; it must be mastered by compulsion. The only precaution of any importance now enforced is that which refuses admission to the public schools to all children who have never been vaccinated. This is something, but it does not reach the two large classes of the population in which the mortality from this disease is by far the largest, namely, those under 5 years of age and adults between 20 and 40. There are three measures, by no means impracticable, which, if enforced, would make smallpox a rare disease among us. They are insulation, vaccination, and re-vaccination.

During the twenty-five years prior to the repeal of the law requiring the removal and isolation of infected persons, there were but 52 deaths from this disease in Boston; while in the two years which succeeded, the number of deaths was 175. This vast increase, although in some part perhaps due to other causes, is sufficient proof of the necessity of such restriction at the present time. It is of course impossible to remove all patients from private dwellings, but it is possible and necessary to convert such houses into strict quarantine stations, by some external sign as in country villages, or by the presence of a health officer. From the crowded tenements of the poor, however, there should be no hesitation about removing every case of the infection. We would not have them sent to an island hospital, for the city is bound to provide proper accommodation within its own limits for the reception both of the poor and of that large class of persons who live in hotels and boarding-houses. In his last annual address, the Mayor wisely recommended that the hospital for smallpox patients should be transferred from the Internal Health Department and placed under the charge of the Trustees of the City Hospital. The citizens who pay so largely for this public charity may with reason ask that this institution shall furnish accommodation for its real necessities. When the city shall provide such, and enforce the provision relating

to localities where the disease prevails, according to sections 27 and 28 of the statutes, it will have done much to check the frequent repetition of these epidemics.

Prevention, however, will effect still more ; but until we have a law which enforces the vaccination of every child born in the city before it attains the age of six months (not two years, as expressed in the statute), and provides for the appointment of district visiting officers to see that the law is observed, we cannot rely upon vaccination for safety against this disease. There is another class of the community also, which contributes largely to the introduction of contagion and to the supply of the material which maintains it. No immigrants should be allowed to land upon our wharves until they have been vaccinated. Out of the whole number of deaths, 318, in the epidemic of 1859 and 1860, 113 were in persons between 20 and 40 years of age. Of these, but 4 were born in Boston, while 72 were from Maine, Ireland and British Provinces.

It will be observed that Dr. Read states in his circular that "the result of all experience is, that *all persons in whom re-vaccination has been repeated until it ceases to take, will forever after be perfectly secured against any attack of varioloid, as well as variola.*" This is a very important statement, and it is to be regretted that a doctrine at variance with the opinions of the highest authorities on variolous and vaccine diseases should not have been more fully explained. Our own investigations have led us to a different conclusion. We believe that the successful insertion of the vaccine virus at one point is as thoroughly protective as if introduced by a dozen vesicles, both in vaccination and re-vaccination. We know that smallpox does not always protect against itself, and that when the system has been saturated in this manner with unmitigated virus it may in time lose the protection thus afforded, and become once more susceptible to its influence. Is it reasonable, then, to expect more of vaccination? We believe that the immunity conferred by vaccination is not alike either in amount or duration in all persons ; that the history of epidemics teaches that smallpox will attack a definite proportion of the vaccinated, if exposed to its influence ; that post-vaccine smallpox is very rare before the tenth year in children, and that it increases in frequency from the age of 12 to that of 25 ; that after the age of 35 the inherent predisposition to smallpox seems to die out to a great extent both in the protected and unprotected. We believe, too, that we possess in re-vaccination our only means of ascertaining the condition of individual security at any time, and of affording it when found wanting. We do not propose, however, to discuss this question at length, but merely to caution physicians against neglecting repeated re-vaccinations upon a theory which we believe to be unsupported by sufficient proof.

Harvard University.—The commencement exercises in the Medical Department were held at the Medical College on Wednesday, the 8th inst. Prayer was offered by Prof. Andrew P. Peabody, D.D. Selected dissertations were then read by members of the graduating class in the following order :—1. Gangrene of the Lung. Ethan Allen Paul Brewster, Appleton, Wis. 2. Mind on Disease. Somerville Dickey, Cornwallis, N. S. 3. Periodical Fever. Peter Paul Gilmartin, Boston.

4. Hospital Gangrene. George Whitefield Johnson, Southboro'. 5. Pyæmia. John William Parsons, Rye, N. H. 6. Smallpox. Daniel Thurber Nelson, Amherst.

Degrees of Doctor of Medicine were conferred upon 42 gentlemen, whose names are given below.

The address to the graduating class was delivered by the Rev. President, and was characterized by the sound learning and practical wisdom which fit him so eminently for the position he occupies. We trust it will be published, for the lessons drawn so deeply from the study of nature and humanity should extend their influence beyond the audience there gathered to hear him.

Massachusetts Medical College.—The following gentlemen received their degrees from Harvard University on the 8th inst. :—

Name and Residence.	Thesis.
Brewster, Ethan Allen Paul, *Appleton, Wisc.*,	Gangrene of the Lung.
Brown, John Peaslee, *Raymond, N. H.*,	Scarlatina.
Buckley, William Barry, *Halifax, N. S.*,	Uterine Hæmorrhage.
Burnham, Charles Abram, *Haverhill*,	Dysentery.
Burgess, Fred. Newton, *Kempt, N. S.*,	Inflammation.
Butman, George Feveryear, *Dedham*,	Contagiousness of Phthisis.
Campbell, William Henry, *Watertown*,	Spontaneous Aneurism.
Cole, Isaac Griswold, *N. Ferrisburgh, Vt.*,	Mercury.
Copeland, Horatio Franklin, *Easton*,	Measles.
Dearborn, F. Merryweather, *Cliftondale*,	Vaccination.
Dickey, Somerville, *Cornwallis, N. S.*,	Mind on Disease.
Disbrow, Robert, *Omemee, C. W.*,	Variola.
Dunham, William Russell, *Northampton*,	Pneumonia.
Falconer, Alexander Frank, *Pictou, N. S.*,	Pneumonia.
Gilmartin, Peter Paul, *Boston*,	Periodical Fever.
Hamilton, Charles Wm. Frederic, *Cornwallis, N. S.*,	Dislocation of Hip-joint.
Holmes, Arthur Almond, *Athens, Me.*,	Pneumonia.
Homer, John, *Bucksport, Me.*,	Pneumonia.
Hall, William Henry, *East Boston*,	Fever.
Jackson, Cornelius Sampson, *Plymouth*,	Digestion.
Johnson, George Whitefield, *Southboro'*,	Hospital Gangrene.
Johnson, Richard, *Charlottetown, P. E. I.*,	Inflammation.
Lawson, Frank, *Charlottetown, P. E. I.*,	Delirium Tremens.
Macdonald, Malcolm Campbell, *Cambridge, N. B.*,	Spinal Cord.
Macdonald, William Lewis, *Cambridge, N. B.*,	Respiration.
Masters, George W., *Boston*,	Dysentery.
McDonald, Archibald Elexcis, *Boston*,	Pneumonia.
McLaren, Andrew, *Halifax, N. S.*,	Placenta.
Nelson, Daniel Thurber, *Boston*,	Smallpox.
Norris, Albert Lane, *Boston*,	Diaphragmatic Hernia.
O'Connor, James J., *Springfield*,	Typhoid Fever.
Olloqui, Rufino Augustine, *Boston*,	Poisoning.
Parsons, John William, *Rye, N. H.*,	Pyæmia.
Phillipps, Fred. Henry Richard, *So. Marshfield*,	Fracture of the Surgical Neck of the Humerus.
Porter, Albert Augustus, *Chelsea*,	Aneurism of the Aorta.
Presbrey, Silas Dean, *Taunton*,	Acute Mammary Abscess.
Sawyer, B. Addison, *Haverhill*,	Podophyllin.
Sproat, Henry Hamilton, *Middleboro'*,	Typhoid Fever.
Swan, Wm. Ellery Channing, *So. Easton*,	Dysentery.
Webster, Joseph, *New Bedford*,	Pneumonia.
Weston, Edward Henry, *Cambridge*,	Adulterations of Medicines and Food.
Woodward, Daniel Buttrick, *Marlboro', N. H.*,	Diagnosis.

George C. Shattuck, M.D.,
Dean of the Medical Faculty.

Wednesday, March 15, 1865.

A Tribute to Doctors.—A pleasant, gossipping, amusing writer in *Blackwood's Magazine*, who discourses from month to month on "*Men*

and Women," under the suggestive name of CORNELIUS O'DOWD, talks in the following style "about Doctors" :—

I read in the French papers, under the heading "Interesting to Physicians," that a doctor has been sentenced to fine and imprisonment for having divulged the malady of a patient, and in this way occasioned him heavy injury.

Without for a moment questioning the justice of this conviction, it appears to me a curious trait of our age and manners that such a case should ever have come to trial at all. That we make our revelations to the doctor under the seal of secrecy, is intelligible enough ; but that the law should confirm the bond is, I own, something new to me. In the honorable confidence between the doctor and his patient I have never recognized anything beyond the trustfulness so essential to a beneficial result. The doctor seeks to cure, and the patient to be cured, and for this reason all concealment that might mar or impede this end would be foolish and injurious ; and it is not easy to imagine any amount of *amour propre* that would peril health—perhaps life—for the mere gratification of its peculiar vanity. The French Code, however, takes care that this question should not be left to a mere mutual understanding, but actually places the doctor in the position of a confessor, who is bound under no circumstances to divulge the revelations that are made to him.

It is certainly a proud thought to feel that in the class and status of our medical men in England we have a security far stronger than a statute could confer. I cannot call to mind a single case where a complaint of this kind has been heard—and all from the simple fact that with us doctors were gentlemen before they were physicians, and never forgot to be so after.

It is not perhaps the loftiest, but it is the most practical way to put the point—that in the market-price of any commodity we have the truest estimate of its value. Now, between the doctor whose fee is a guinea and him whose honorarium is two francs, there is an interval in social position represented by that between the two sums. The one, so far as culture, habits, tone of thought, and manners go, is the equal of any he visits ; the other is—very often at least—about as well bred as your valet.

The one is a gentleman, with whom all intercourse is easy and unconstrained ; the other a sort of hybrid very often between cultivation and savagery, with whom it is not easy to say how you are to treat, and who is by no means unlikely to misinterpret every revelation of habits totally unlike all that he is himself accustomed to.

Now there can be no over-estimating the value of a congenial doctor. Instead of dreading the hour of the visit, picturing it to our minds as the interval of increased suffering and annoyance, to feel it as the sunny spot of our day—the pleasantest break in the long languor of the sick-bed—is a marvellous benefit.

This, I am bold to say, is essentially to be found in England above all other countries. George IV., who was a consummate tactician in conversation—all the disparaging estimates of him that have been formed, and some of them I firmly believe to have been unfair, have never denied him this gift—used to say that doctors were essentially the pleasantest talkers he had ever met. They have that happy blending of knowledge of actual life with book-learning, which makes them

thorough men of the world, without the unpleasing asperity of those who have bought their experience too dearly. For, be it remembered, few men see more of the best side of human nature than the doctor; and it is an unspeakable advantage to get an insight into the secrets of the heart, and yet not to have attached any stain to one's self in the pursuit, and, even while investigating a moral pestilence, never to have risked the perils of a contagion.

If it were not that I should be incurring in another form the very defect from whose taint I believe doctors to be exempt, I could tell some curious instances in which the physician obtained knowledge of intentions and projects in the minds of great statesmen, of which they had not at the time fully determined, but were actually canvassing and balancing—weighing the benefit and counting the cost—and one syllable about which they had never dropped to a colleague.

What a benefit is it to have a body of men like this in a country where political action is so easy to discount into gold, and where the certainty of this enactment or the repeal of that could resolve itself into fortune to-morrow!

There is another service doctors have rendered society, and I declare I have never found it either acknowledged or recognized. Of all men, there are none so vigilantly on the watch to protect the public from that pestilence of humbug and deceit which, whether it call itself spiritualism, mesmeric agency, clairvoyance, or any other fashionable trickery of the day, has now resolved itself into a career, and has assumed all the outward signs and dignities of a profession.

To all these the doctor is the sworn foe, and very frequently to his personal detriment and loss. Who has not heard at the dinner-table or the fireside the most outrageous assertions of phenomena, alleged to be perfectly in accordance with natural laws, but of which experience only records one instance or two perhaps in five or six centuries, met by the calm wisdom of the physician, the one man present, perhaps, able to explain the apparent miracle, or refute the palpable absurdity? It has been more than once my own fortune to have witnessed such controversy, and I have never done so without a sense of gratitude that there were disseminated throughout every walk of our social system these upright and honest guardians of truth.

It would be a very curious and a very subtle subject for inquiry, to investigate the share of the doctors in the political education of society. The men who go everywhere, mix with all ranks and gradations of men, talk with each of them on the topics of the day, learning how class and condition influence opinions and modify judgments, must gain an immense insight into the applicability of any measure, and of its bearing on the different gradations of society. With this knowledge, too, they must be able to disseminate their own ideas with considerable power, and enforce their own opinions with arguments derived from various sources, doing these things, not through the weight and power of a blind obedience, as the priest might, but by force of reason, by the exercise of a cultivated understanding aided by especial opportunity. If I were a statesman, I would cultivate these men. I say this in no sense that implies corruption, but I would regard them as an immense agency in the government of mankind; and I would take especial pains to learn their sentiments on measures which touch the social relations of the world, and secure, so far as I might, their honorable aid and co-operation.

They have replaced the priest in that peculiar confidence men accord to those who are theirs, not by blood or kindred, but by the operation of that mysterious relationship that unites relief to suffering.

I say, again, I would cultivate the doctors. They see more, hear more, and know more than other men, and it would be my task to make them the channels of opinion on the interesting topics of the day, by extending to them the amplest confidence and the freest access to information.—*American Druggists' Circular.*

Peristaltic Lozenges.—A correspondent sends us the circular recommending these articles, which contains a paragraph concerning them attributed to this Journal. We can only say that the present Editors are not responsible for the paragraph in question, and would not have written it, as printed in the advertisement, under any circumstances. The paragraph of the circular is altered from that which appeared originally in the Journal, omitting all mention of the principal ingredients of the lozenges, which are said to be senna and iron, and using stronger language of commendation than was there employed. Medical Journalists cannot be too careful of their expressions concerning the compounds of druggists, made for popular sale; unless they they are willing to see them used, as in the present instance, for a purpose for which they were never intended.

Liebig's Invalid Food.—We have received a package of so-called nutritive food for infants and invalids, prepared by Messrs. James R. Nichols & Co., mainly in accordance with the suggestions of Prof. Liebig, as published in the present number of the Journal. The manufacturers, however, with very questionable wisdom, we think, have ventured to make some additions of their own to the composition proposed by that eminent physiologist and chemist. As the manufacturers are not physiologists, we cannot help regarding this as most unwise. However good the article may be, it is *not* Prof. Liebig's. The warrant of his great name is enough to recommend the mixture which he proposes, without any additions. It should not be associated with a different one prepared by a manufacturing chemist.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, March 11th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - - -	47	45	92
Ave. mortality of corresponding weeks for ten years, 1853—1863,	40.9	38.7	79.6
Average corrected to increased population - - - - -	00	00	87.08
Death of persons above 90 - - - - - - - - -	0	0	0

Deaths in Boston for the week ending Saturday noon, March 11th, 92. Males, 47—Females, 45.—Apoplexy, 4—congestion of the brain, 1—disease of the brain, 2—inflammation of the brain, 2—bronchitis, 3—cancer, 1—consumption, 14—convulsions, 2—croup, 4—cyanosis, 1—debility, 1—diphtheria, 1—dropsy, 1—dropsy of the brain, 5—epilepsy, 1—erysipelas, 2—scarlet fever, 2—typhoid fever, 1—gangrene, 1—disease of the heart, 2—infantile disease, 3—intussusception, 1—disease of the kidneys, 1—disease of the liver, 4—congestion of the lungs, 2—inflammation of the lungs, 4—marasmus, 3—neuralgia, 1—paralysis, 1—peritonitis, 1—puerperal disease, 1—smallpox, 4—disease of the spine, 2—suicide, 1—teething, 1—tonsillitis, 1—tumor, 2—unknown, 5—whooping cough, 3.

Under 5 years of age, 39—between 5 and 20 years, 4—between 20 and 40 years, 24—between 40 and 60 years, 15—above 60 years, 10. Born in the United States, 69—Ireland, 13—other places, 10.

THE

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A CASE OF RETINITIS PIGMENTOSA, THE PARENTS OF THE PATIENT BEING FIRST COUSINS.

[Read before, and the patient exhibited to, the Boston Society for Medical Improvement. Communicated for the Boston Medical and Surgical Journal.]

BY HASKET DERBY, M.D., BOSTON.

OBSERVATION thus far goes to show that a certain deep-seated affection of the eye, characterized by a deposit of pigment on the retina and terminating inevitably in blindness, occurs in from 40 to 50 per cent. of the cases in the offspring of the intermarriage of blood relations. I have thought that the exhibition of such a case to the Society, and the demonstration to them of the retinal changes by the aid of the fixed ophthalmoscope, might not be devoid of interest to those even not specially interested in the subject of ophthalmic disease.

M. K., aged 24, entered the Eye Infirmary a few days since, under the care of Dr. F. P. Sprague. She complained chiefly of imperfect vision, which had been gradually increasing since the age of 12. When first troubled in this way, she procured a pair of strong convex glasses, and has read and studied with them up to within six months of the present time, since when, alarmed at the continued failure of vision, she has refrained from all use of the eyes on near objects. Has long been aware that by twilight and in the evening her vision was not as good as other people's. Her general health has always been reasonably good, though she has never been very robust. Catamenia quite regular as to time, though rather deficient in quantity.

The eyes externally are of normal appearance, except that there is a divergent strabismus of about 2‴ on the left side. Each field of vision is much narrowed upwards and inwards. As compared with the normal standard, or unity, the vision of the right eye would be expressed by the fraction $\frac{1}{8}$, that of the left by $\frac{1}{15}$. The ophthalmoscope reveals almost precisely the condition of things pictured in

the plate which is laid before you (Liebreich. *Atlas der Ophthalmoscopie*, Tab. VI., Fig. I.), viz., commencing whiteness and atrophy of the optic nerve, with diminution in size of the vessels, and an abundant deposit of pigment in the retina, surrounding the optic nerve and yellow spot.

Inquiry elicited the fact that the parents were first cousins. Out of six brothers and sisters, one, she says, has "weak eyes," and one has vision similar to her own.

[For much of the foregoing, and for the permission to exhibit the case to the Society, I am indebted to my friend and colleague, Dr. Sprague.]

Similar cases are of not infrequent occurrence, and were observed for the first time within two years of the discovery of the ophthalmoscope, though the connection of the disease with the relationship of the parents was first remarked upon by Liebreich four years ago.

The earliest symptom is night-blindness, or, more generally speaking, the inability of the patient to see in a dim light. This may have been observed from early youth, and have increased so gradually as to give rise to but little uneasiness. Experience shows that the patients have become so completely used to this state of things as to accept it as a congenital and unavoidable deficiency of vision, and continue to use their eyes without restriction till warned by more urgent symptoms. Such are deep-seated pains, extreme heaviness of the lids, and especially the diminution of vision, at first lateral and finally central. It is usually at this stage that medical advice is first sought. An examination shows the field of vision to be greatly narrowed, while central vision itself may or may not be far below the normal standard. The lateral sensibility of the retina may be so diminished that the patient is unable to go about alone, and yet the limited portion that retains its activity may be capable of distinguishing the finest object. Externally nothing is visible, except perhaps a slight narrowing of the pupils. The ophthalmoscope shows the optic-nerve entrance to be at times in a partially atrophied state, at times irregularly defined and of a grayish-red color. The vessels of the retina are unevenly filled, occasionally partially obliterated. But the most important and characteristic change takes place in the retina itself, and consists in the development of masses of pigment of varying size and shape, from the smallest point to the irregularly stellated patch, surrounding the optic nerve and macula lutea in a band or zone, parallel—as a circle—to the iris, and generally broader on the inner than on the outer side. These masses of pigment are found on close scrutiny to be made up of innumerable fine points or separate cells. They are often grouped about the retinal vessels and follow their course.

As regards the origin of this accumulation of pigment, different opinions have prevailed. It seems, however, to be at present esta-

blished that it may be either the result of choroidal disease, and may find its way from this structure into the retina; or that an independent development of pigment may take place along the course of the retinal vessels. These last show in such cases a thickening of their walls and obliteration of the finer branches.

The prognosis of retinitis pigmentosa is uniformly unfavorable. The masses of pigment push forward, invade the macula lutea, and frequently obscure the optic disc itself. The retinal vessels are thus either hidden or atrophy and become obliterated. Blindness sets in, generally between the ages of 30 and 40, sometimes a few years later.

TRANSPORTATION OF THE WOUNDED FROM THE FIELD OF BATTLE.

By T. H. Squire, Surgeon 89th N. Y. Vols.

[Communicated for the Boston Medical and Surgical Journal.]

In order to comprehend exactly how the wounded are taken from a field of battle, it is necessary to know what a field of battle is, or, in other words, to understand the organization and disposition of an army on the eve of an engagement. There is, perhaps, no better figure illustrative of an army corps, in line of battle, than a tree. The *point d'appui*, or base of support, is the root, the head-quarters of the commanding general is the trunk, the three divisions of the army corps are the three main branches, the nine brigades are the primitive subdivisions of these branches, the thirty-six regiments are the smaller limbs, the three hundred and sixty companies are the ultimate twigs, and the skirmishers are the leaves. Within a military tree of this kind several batteries may occupy positions. An army of large size may consist of several such military trees, planted side by side, forming a battle-line that will stretch to the right and left for several miles; the trunks of the different military trees corresponding to the different roads that lead through the country, and the divisional, brigade and regimental branches extending through fields and woods, over hills and through valleys, between.

The wounded of a battle-field are divided into two classes; those who are able to help themselves from the field, and those who must lie where they fall till assistance comes to their relief. A soldier of the former class, when wounded, steps back from his place, and reports to his nearest officer for permission to go to the rear. He passes the company and the regimental commander, and soon comes to a partially sheltered nook, where the surgeon has, for the time being, established the *regimental hospital*. Here his name is registered by the hospital steward, his wound is examined and hastily dressed by the surgeon, and he proceeds onward with a written pass from the medical officer, till he comes to a yellow flag, planted on the divi-

sional branch of the military tree, which indicates the *division hospital.* Here his name is registered again, his wound is redressed if necessary, he receives some coffee and other refreshments, and then resumes his march for the *corps hospital,* at the root of the tree, where he either remains for treatment or takes steam transportation to some *general hospital,* beyond the theatre of military operations.

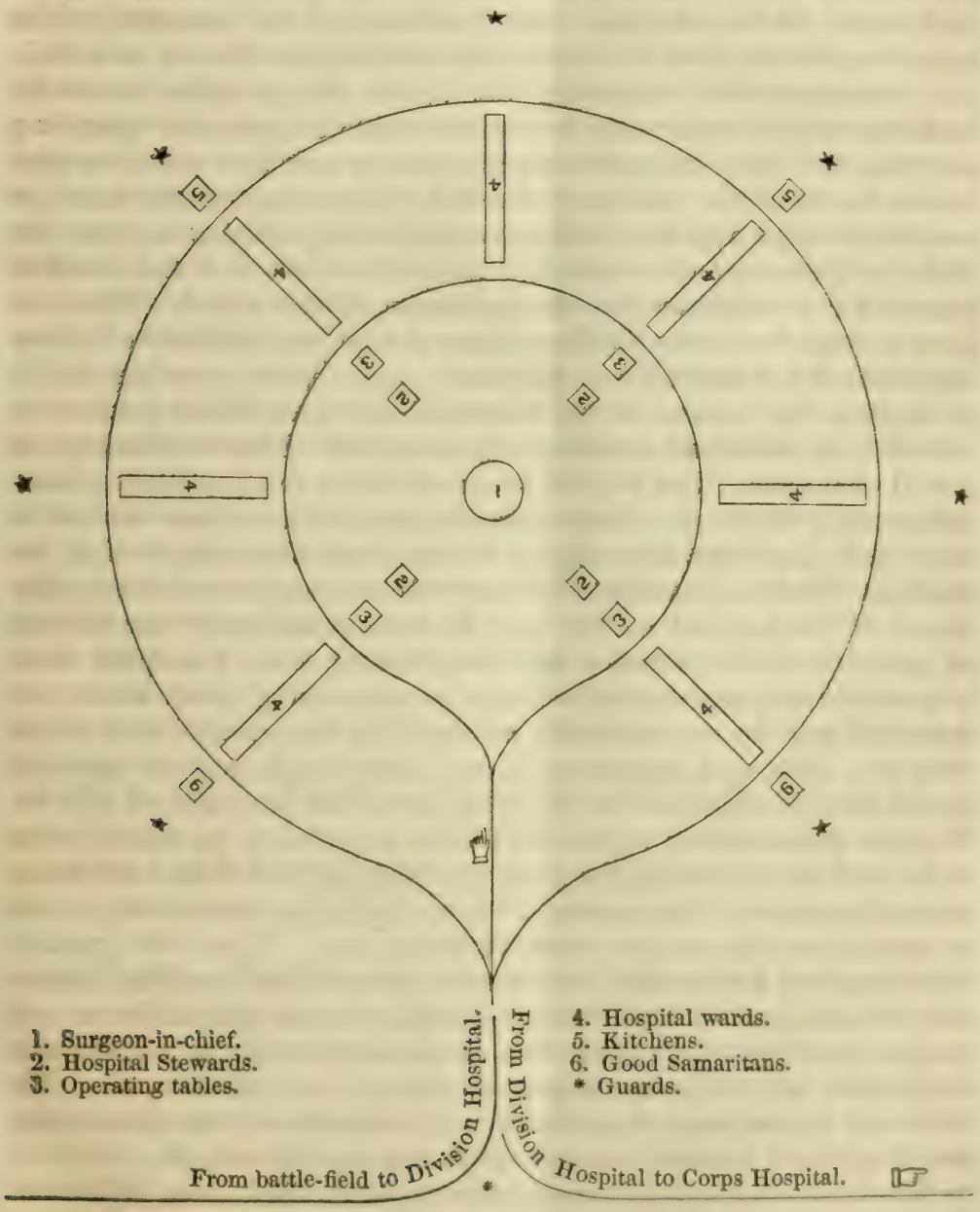
For the assistance of the wounded of the latter class, stretchers and stretcher-bearers, ambulances and ambulance-attendants, are required. A stretcher, upon which a wounded man is laid to be borne from the field, is eight feet eight inches long, two feet wide and fifteen inches high, and its weight is twenty-one pounds. The legs are so attached that they may be folded into parallelism with the side rails, and the iron cross-bars, designed to render the canvass tense, have joints in the middle, which may be flexed so as to allow the side rails to fall together—the legs only intervening—and, in this compact form, the stretcher occupies but little space in transportation or in storage. The canvass itself is only six feet long, the extension of the side rails at each end, for handles, making up the balance of the eight feet eight inches. During an engagement, the musicians of a regiment, twenty-two in number, are the stretcher-bearers. They are under the charge of the surgeon.

An ambulance is a closed chamber, six feet four inches long, three feet ten inches wide, and four feet eight inches high; borne upon four wheels and drawn by two horses. The bed inside of the chamber, wide enough for three persons, is, for the convenience of description, a second floor thirteen inches above the real floor of the chamber.* A longitudinal section, twenty inches wide, in the middle of this bed, may be dropped, half of it either way, like folding-doors or table-falls, and thus the chamber is provided with two long seats capable of accommodating eight persons sitting. Each ambulance is provided with two stretchers, securely lashed to the outside of the chamber. The floor, the frame of the bed, and all the lower parts of the ambulance chamber, are made of wood; the ceiling and the upper part of the sides are of canvass, supported by appropriate ribs or bows. An army corps has eighty ambulances. Each ambulance has three attendants, who are detailed soldiers; one to drive the team and two to assist the wounded.

Such accommodations being at hand, the soldier who falls on the field of battle, and is unable to rise again, is carefully taken up by the musicians, laid upon a stretcher, and carried to the regimental hospital. His first and most urgent wants are here ministered to by the surgeon, and he is then placed in an ambulance, and thus transported to the division hospital. The division hospital is the place where all the surgical operations of the battle-field are performed. Whatever of confusion may exist elsewhere, perfect system and order

* It is a defect in the United States Ambulance, that the bed is not constructed with stationary pillows.

must prevail here. The division hospital corps is composed of a variable number of surgeons, hospital stewards, nurses, cooks, teamsters, working men, and guards. The *material* of the hospital consists, mainly, of surgical instruments, surgical dressings, medicines, blankets, tent-flies, axes and other implements for the working men, commissary stores and furniture for cooking and serving the food, and the necessary teams for transportation. Whenever the division moves, the division hospital moves with it, always keeping, as nearly as possible, the relative position it will require to occupy in case of an action.



The precise location of the division hospital is always a matter of much importance, and it generally happens that the selection of place

must be made very quickly. Several things require to be considered in making this selection. The hospital must be as near to the line of battle as it can be without being disturbed by the enemy's missiles. It must never be within reach of small balls, and, if admissible, it should also be beyond the range of shot and shell. It should be, as nearly as possible, on the main line of communication from the division centre to the army base. Convenience to good water is always a great desideratum, and natural shade is of much importance in the heat of summer. The ground for the location of the division hospital having been selected, preparations are immediately made for the reception and treatment of the wounded. The most convenient form for a division hospital is that of a wheel; the surgeon-in-chief occupying the centre, the hospital stewards, medicines and dressings the innermost circle or zone, the operating surgeons and their tables the second zone, a carriage way for ambulances the third, the radiating wards for the wounded the fourth, a second carriage way for ambulances and transportation wagons the fifth, the kitchens and commissary stores the sixth, and the hospital guards the seventh, or the circumference of the wheel. The surgeon-in-chief has under his immediate charge one medical officer to superintend the execution of his plans, one or more recording clerks to register the names of the wounded, and a sufficient number of orderlies to attend all communications and miscellaneous business of trivial character. The hospital stewards stand ready at their places, anticipating the wants of the operating surgeons, so that the medicines and dressings may always be at hand the instant they are needed. The amputating tables may either be a part of the regular stores of the hospital, or they may be extemporaneously constructed of materials obtained from neighboring houses, &c. A hospital ward is a certain awning-covered rectangular space of ground, where the wounded may be systematically arranged in two parallel ranks, with their feet towards a common aisle and their heads resting upon opposite straight ridges of earth, which serve the purposes of pillows. Wisdom and economy in time and labor are shown in constructing these earthen pillows at the same time that parallel drains are made under the eaves of the awning, to keep the patients and the ground as dry as possible in the event of heavy rain. Upon the ground, thus prepared for the first brief resting place of the wounded, straw, hay, or corn-husks from the neighboring barns and fields, or soft boughs from the trees, are strewn to make the beds as comfortable as possible for those who are now helpless and full of pain. The affairs of the culinary department, and the duties of the guards, are too simple and too obvious to require any special remark.

The surgeon-in-chief is peculiarly fitted for his place if he succeeds in having all his arrangements perfect by the time the ambulances arrive. In such a case the ambulances immediately enter the inner carriage-way, and, under the supervision of a medical

officer, the wounded are classified according to the urgency of their respective claims for assistance; the severer cases being placed immediately upon the tables, or near the tables, and the other cases being so arranged in the wards that those of least danger will be farthest removed from the operating surgeons, and nearest the outer carriage-way.

The wounded are not to remain at the division hospital any longer than is absolutely necessary for the performance of operations, the application of dressings, and the administration of medicines, food and refreshments. When—owing to the number of the wounded, or the distance to the corps hospital or place for steam transportation—the ambulances prove insufficient, the ammunition wagons, and all other empty wagons returning to the rear, make the circuit of the outer carriage-way and take in such cases as can ride, in this way, without serious detriment to their wounds; and thus the labor for the ambulances is materially lessened.

For the transportation of the wounded by steam, hospital cars are made use of on railroads, and hospital ships on rivers and the ocean. A hospital car is a common passenger car, with narrow beds instead of seats on either side of the central aisle. There are three tiers of beds, in height, on either side, and five beds in each tier, making thirty beds in each car. A hospital ship is nothing more than a common steamer, well furnished with beds and all other requisites for wounded men.

It is a rule in military surgery that all surgical operations, required for gun-shot wounds, should be primary. It is equally important that all transportation of the wounded should be completed before the advent of inflammatory fever.

In the Field, Army of the James, March 11, 1865.

CLINICAL LECTURES ON SCRIVENERS' PALSY, OR PARALYSIS OF WRITERS.

DELIVERED AT ST. THOMAS'S HOSPITAL, LONDON, BY SAMUEL SOLLY, ESQ., F.R.S., SENIOR SURGEON TO THE HOSPITAL.

LECTURE I.

GENTLEMEN,—There is a rare disease of the nervous system regarding which I am desirous of having some talk with you. It is scriveners' palsy, or writers' paralysis. Happily for suffering humanity, this form of palsy is rare, notwithstanding the fact that the greatest part of the middle classes of London get their bread by the use of the pen, either as the exponent of their own thoughts or the thoughts of others, or in recording the sums gained, lost, or spent in this great emporium of commerce—this vast Babylon. Its insidious attack is not limited to the male sex, though, of course, the usual occupations of woman render her less liable to it. I know, however, one case;

that of a talented and highly-gifted lady, now no more, who suffered from it for some years, and up to the time of her death, which was not caused by it, or by any direct disease of the nervous system. This lady, the wife of a baronet, was poisoned by bad drainage in one of the fashionable quarters at the west end of London, and died of diphtheria. I have stated that the disease is comparatively rare; and it is astonishing how little has been written on the subject. Even that leviathan of medical lore, Dr. Copland, has not treated of it in his "Dictionary of Practical Medicine." Nevertheless, it is a most important subject. Upon your early correct diagnosis may depend the health and happiness of your patient. If you mistake its real nature, and regard it as a sign of incipient softening of the brain—a mistake which I have known to occur—you may destroy the happiness of your patient, and bring on the very disease which you have erroneously diagnosed. You might easily do so, particularly if you had lately had an opportunity of seeing at a lunatic asylum much of the creeping or general paralysis of the insane, and mistake it for that sad and hopeless disease, merely because your mind has been filled with its gloomy but variable aspect. The chief inconveniences from an error in diagnosis would be, perhaps, the loss of some valuable time in adopting a proper treatment, and giving great and painful anxiety to the patient's relatives and friends.

The disease, as the name implies, shows itself outwardly in a palsy of the writing powers. The muscles cease to obey the mandates of the will. It comes on very insidiously, the first indication only a painful feeling in the thumb or forefinger of the writing hand, accompanied with some stiffness; these unnatural sensations subsiding during the hours of rest and sleep, to return with the writer's work on the next day.

The loss of power is not sudden, as in a paralytic stroke, nor is it a complete paralysis of any group of muscles. The paralyzed scrivener, though he cannot write, can amuse himself in his garden, can shoot, and cut his meat like a Christian at the dinner-table; indeed he can do almost anything he likes, except earn his daily bread as a scribbler.

Scrivener's palsy is not the only instance of a set of muscles being cramped and paralyzed by long-continued exertion. There is, as has been observed by Virchow,* shoemaker's cramp, milking cramp, the musicians' cramp, compositors' and the sempstresses' cramp.

When scriveners' palsy first commences, the victim of it only feels its direful influence after a hard day's work. He regards it only as a sign of fatigue, and, as he starts fresh the next morning, attaches no importance to it as the first attack of a serious enemy; but in a short time he is obliged to rest earlier in the day, and hails his early

* Virchow; Handbuch der Speciellen Pathologie und Therapie.

dinner hour with joy, as giving him some respite from the fangs of his tormentor. He tries to overcome his difficulty by holding the pen firmer, but this really only increases the evil. Suddenly he finds his pen dash off at a tangent, and the word that he intended to write in the proper line is, to his horror, commenced in the left-hand corner of the page. Not unfrequently the act of writing is arrested, not by such sudden diversion, but by trembling, and a shaking palsy limited to the right hand.

In the cases that have come under my own notice, I have observed much disturbance also in the functions of the nerves of sensation. There is generally a feeling of weariness and slight pins and needles, but usually not numbness. Virchow, who has seen more of these cases, says:—"Ordinarily no disturbances of the sensibility show themselves, except an undefined feeling of straining or fatigue; sometimes a pressure in that part of the muscle; a painful drawing of the nerves in the direction of the trunk; a cold feeling in the whole arm. These morbid sensations only appear, as a rule, after strained efforts to overcome the spasmodic hindrance (or impediment); probably, from their very passing appearance lasting so short a time, are not observed. The whole of the sufferings come after long-sustained and strained employment of the fingers and hands; and the cramp only appears later. In the case of Vallerond, after a wound from an exploding shell (?), a fragment of which remained for a long time in the wounded middle finger, a constant pain followed, which was accompanied later by a winter's croup, which resisted all attempts at cure. Fanciful, peculiar tremblings, as with Romberg's nailsmith, without any other consequence, give rise to severe pains, which only accompany certain movements, and are followed by tonic cramp of the muscles. A smith complained to me from the same cause, besides sensitiveness in the arm, of a frequent firm contraction of the fingers of the right hand, accompanied by the feeling of its having gone to sleep. These appearances were perceptible in rest, as well as in different movements. I myself once got severe pain in the muscles of the hand after long-continued work at anatomy; and I was then for a considerable time subject to it in holding the forceps, and to powerful tonic contractions of the muscles used for that purpose."

Before considering the pathology of this disease, I will relate briefly some cases of it which have come before me in my private practice. The first I shall give in the patient's own words, which are very graphic.

"I am a clerk of four years' service in the —— Bank. My duties consist entirely in writing. I first felt pain in my right arm about May, 1862; had then been in the employ of the above-mentioned bank three years, and during that time had worked extremely hard, writing without cessation from morning till evening. Before entering the —— Bank I had been in the service of the —— Bank of Lon-

don for a few months, and prior to that, with the exception of a year or two at school in London, had spent the principal portion of my life in North Wales, where boating, walking, and other out-door amusements, occupied the greater portion of my time.

"The first symptoms were those of a sprain in the wrist, but I could not recollect hurting it in any way. I, however, used embrocations, and bandaged it for a fortnight. It did not get better, so I discontiuued writing for a few days, and it improved so much that I soon resumed work, though still experiencing slight inconvenience, which gradually increased. At this date the pain was most violent between the knuckles of the first and second, and second and third fingers of my right hand. When I moved my second finger I could feel an uneasy sensation striking up my arm, apparently in the sinews connected with that finger. However, I could do a long day's work, and often wrote in the evening for my own amusement, not thinking the complaint from which I suffered very serious. At this time I was a volunteer, but finding the weight of the rifle too heavy for my weak arm to carry, I resigned. I then went to my doctor for advice. He had been previously treating me for sluggish liver and piles. Explaining to him the above-mentioned symptoms, he imagined my complaint to be rheumatism, and treated me accordingly. I still continued to work as much as before. The pain was a burning, uncomfortable feeling between the knuckles (more especially between the second and third fingers) and in the back of the hand, extending occasionally to the shoulder after writing about an hour, and gradually getting worse whilst writing. I worked on in this state for eight months. At times the symptoms were very much more violent, and I frequently in the course of a day had to put down my pen, feeling it quite impossible to continue work in that state, but a few minutes' rest always gave me relief, and I resumed work.

"About this time (Jan. 1863), I obtained a letter of introduction from my manager to you. On this occasion you prescribed for me the sixteenth of a grain of strychnia twice a day. By your advice I at once left off writing, and went home to Wales. When first I discontinued work I experienced great relief; so much so, indeed, that I at times could scarcely feel there was anything the matter with my arm; but the fatigue of the long journey home brought it back again, and when I arrived, the burning sensation returned with great force, and extended all over the back part of my shoulder, and when I wrote I could feel it creeping down my side and under my shoulder-bone. It also became uncomfortable; on the skin a nasty, nervous sensation, accompanied by the old symptoms of burning and bursting, became apparent; it troubled me in the night, frequently keeping me awake for hours, and if by any possibility I happened to turn over and sleep upon it, the symptoms would all increase, and the pain become very violent. I continued to use your prescription, and gave my arm entire rest, had a sling made to keep it in a com-

fortable position, but all to no purpose. So I wrote to you for instructions. You told me to increase the dose of strychnine, under the superintendence of my medical adviser on the spot. I did as you directed, also by advice of the family doctor; hired shower-baths of sea-water, and had water poured down the spine. I also went to Dublin, and consulted a doctor there—Dr. Wilson. He prescribed for me, but without effect; so I returned to London after an absence of two months, with symptoms all more marked than when I left town. You then gave me another prescription, and ordered blisters to be applied to my shoulder and inside part of my arm, just above my elbow, and told me to poultice the blisters, which I did for about a fortnight, my occupation being at this time changed, having a berth assigned to me which required little writing of importance. I did not again visit you.

"About April, 1863, or eleven months from the time I was first attacked, I was examined by an hospital surgeon, who told me that he thought I must have injured a nerve in my neck, probably at some remote period. He advised me to try what light exercise of my arm would do, and did not prescribe; and desired me to visit him in two months. I then went to a celebrated West-end physician, who prescribed; but the medicine proved too strong, so I discontinued it.

"My present symptoms are as follows:—When the weather is very settled, and neither extremely warm nor cold, as long as I entirely rest my arm, it is pretty comfortable; though at all times I can feel a nervous pain, and the more I think about it the worse it becomes. If I take up a pen to write, I feel that a change takes place instantly; and directly I commence writing, the old burning sensation and uncomfortable nervous feeling comes on, and would no doubt increase if I wrote a dozen lines with my right hand; for even signing my name at times causes me much inconvenience. Changes of weather, especially from warm to cold, cause me much uneasiness, as it is always worse when cold, and is also very much affected by the state of my health; as when low-spirited or suffering from piles I find it is worse. When very cold weather sets in, it aches and burns very much, and I feel at times a violent pain under the shoulder-bone. The exertion of writing this short account, though with my left hand, has made it feel much worse; it aches, burns, and pains me about the right shoulder, and even up to the back part of my head; while a nasty creeping sensation pervades the whole of my shoulder, arm, and hand.—I am, Sir, your most obedient servant, G. D."

I have advised this gentleman to abandon the use of the pen altogether, to take a sea voyage, and carry his arm in a sling, to remind him that he must not use it.

[To be continued.]

Bibliographical Notices.

Defective and Impaired Vision, with the Clinical use of the Ophthalmoscope in their Diagnosis and Treatment. By Laurence Turnbull, M.D., Ophthalmic Surgeon to Howard Hospital, Member of the American Med. Association, &c. Philadelphia: Lindsay & Blakiston. 1865.

Ophthalmology seems to be especially unfortunate in its American literature. A few years ago the American Medical Association published a ($100.00) prize essay that disgraced both the Committee and the Association, and yet notwithstanding the severe but just criticism it received, the Association published two years afterwards a report on ophthalmic surgery still more disgraceful. This *was* to have been continued. Again, we have had an *American Journal of Ophthalmology* published for the last two years in New York, which, as it mostly consisted of translations from the German and French, would have been of some use at least to those unfamiliar with the foreign languages, had the English used been pure. But such is the barbarity of the language that the reader will be most likely to throw down the number in the belief that no truth can be concealed under such a guise. It is not in any sense an American journal, yet it goes abroad as a representative of the state of ophthalmology in this country. It is believed that these facts have positively deterred the scientific oculists of this country from publishing their original observations or presenting to their medical brethren the results of foreign research. An honorable exception must be here made in favor of various papers that have from time to time made their appearance in the *American Medical Times* of New York. The general practitioner naturally does not distinguish between what is true and valuable and that which is garbled and one-sided. And thus the timidity of scientific modesty prevents much from appearing that is truly interesting to all, from fear of its being classed with charlatanism. Prof. Donder's truly magnificent work on the Accommodation and Refraction of the Eye, printed in English by the New Sydenham Society, covers nearly all the ground that heretofore could only be trod by those familiar with German and French. American oculists need not therefore now be the exponents to their professional brethren of the advance in ophthalmology made upon the other side of the Atlantic. This work, and two or three others lately published in England, seem to us to exclude the necessity for such a pamphlet as the one before us entitled "Defective and Impaired Vision, with the Clinical use of the Ophthalmoscope." It consists of a series of extracts from European authors, collected for the purpose of "bringing before the great mass of intelligent and reading physicians of the United States much that is new and interesting on the ophthalmoscope and deep-seated diseases of the eye."

Now our objection is, that if it is requisite or useful to lay before the general practitioner in the form of a pamphlet the rapid strides of ophthalmic science, it is as requisite that this pamphlet should give the very last step that is in advance of our former knowledge. Here, we think, the author has failed. For instance, under the head of "Ophthalmoscope," not a word is said in reference to the *binocular ophthalmoscope* or the *autophthalmoscope*. The author quotes from Zander, but does not tell us that Dr. Carter has published, in England, a

translation of Zander with notes, where the reader can learn about the different forms of ophthalmoscopes and the theory of their make and use, without a knowledge of which the general practitioner will have great difficulty in trying to satisfy his curiosity in obtaining a view of the fundus oculi.

With reference to the action of belladonna and opium on the iris, Dr. Hayden, of Dublin, is quoted in the most authoritative manner. Now on this point it has been well said "that the last theory dates from the last experiment." The latest research denies the existence of radiating fibres in the human iris, and with this view Prof. Donders seems to agree, as he says: "Independent radiating fasciculi of fibres are less easily demonstrated. The vascular trunks, which likewise have a radiating direction, possess a distinct muscular layer; and it is generally difficult to prove that the fibrous bundles found do not belong to the vessels. However, most anatomists think that they have satisfied themselves as to their presence. *In this I never completely succeeded.*" (*Syd. Soc. Transl.*, p. 23.) Certainly their presence in the iris of the bird and not in that of man would best reconcile the at present very contradictory experiments of the action of various substances upon the size of the pupil and the curvature of the lens. In reference to the anatomy of the ciliary muscle the author certainly cannot be acquainted with the latest published articles, or he would not give us such an idea of it as he does. The so-called circular fibres of Müller do not act as a separate muscle. They, together with the more longitudinal fibres, cause, by contracting, the approach of the choroidal end of the muscle to the corneal end, i. e., they draw forward the ligament of the lens and slacken it up.

We pass over the remarks on clinical ophthalmoscopy to come to what the author has quoted in reference to glaucoma and iridectomy. There certainly was no need to lay before the profession the very feeble attack on ophthalmologists from the *Dublin Quarterly* and the *Dublin Medical Press*. We are glad that as an antidote the author has inserted Bowman's very dignified and masterly reply, in which he gives the sum and substance of glaucoma and the importance of iridectomy. The author does not tell us about Mr. Hancock's operation further than to quote Mr. Bowman's remarks, which are sufficient for those who know all about it. We would simply remark, in passing, that the (at least theoretical) basis of Mr. Hancock's opening of the aqueous and vitreous chambers rests upon what he calls "*division of the ciliary muscle.*" His operation does not divide the ciliary muscle. Nothing would do that short of a circular incision through the sclerotic over the middle of the muscle, in other words abscision of the anterior third of the globe.

Part of Mr. Bowman's remarks the author prints in "Jäger's test types for the convenience of his readers." The English part of Jäger's test types was unfortunately chosen, and we endeavored, therefore, a few years ago, to have them reprinted in better English. This we found to be impossible, as we had already imagined, knowing what difficulty Prof. Jäger himself had to obtain type for his first edition. We were therefore agreeably surprised to find this accomplished in this country. But upon inspection we find that this test type does not correspond in any way whatever with Prof. Jäger's, and is really of no use, except to give an *idea* of what Jäger's was. It is quite extra-

ordinary that the author does not mention Snellen's most admirable test types, now taking the place of Jäger's, or his own townsman Dr. Dyer's types, copied in part from Snellen.

Let us pass over to the section headed "Accommodation of the Eye." Here certainly was an opportunity to inform the general profession of a step in advance in ophthalmology. But we are left altogether in the lurch just as the account commenced to be interesting. The wood-cut given is extremely faulty, even as a mere diagram. There are certainly many more correct ones published, which might have been copied. The reader had better have been referred to Prof. Donder's book, where he certainly had also better be referred for all that concerns the anomalies of refraction, including *astigmatism*, which the author *does not mention*, and which is the latest and one of the most striking studies of the last few years. We therefore do not recognize the necessity for, or the special value of, this pamphlet. J.

A System of Surgery; Pathological, Diagnostic, Therapeutic and Operative. By Samuel D. Gross, M.D., Professor of Surgery in the Jefferson Medical College, &c. &c. Illustrated by over thirteen hundred Engravings. Third Edition, much enlarged and carefully revised. In two volumes. Philadelphia: Blanchard & Lea. 1864.

Prof. Gross's large work is well known, and, we believe, fully appreciated wherever the English language is read, and its great merits and small defects have been noticed by us on the appearance of the former editions. In the present issue every chapter has been revised, and additions to the extent of two hundred pages have been introduced throughout the text, the previous arrangement of matter being retained. Although deficient in some respects, when compared with the latest published records of the investigations of the masters in special branches of surgery, it must long remain the most comprehensive work on this important part of medicine.

A Manual for the Medical Officers of the United States Army. By Charles R. Greenleaf, M.D., Assistant Surgeon U.S.A. Philadelphia: J. B. Lippincott & Co. 1864.

The meaning of this little compilation, which we can cordially recommend to the hospital surgeon, is so well explained by the author in the preface that we give it in full. He seems to have accomplished his task in a thorough manner.

"The medical officer is brought more closely in contact with the various departments of the Army than perhaps any other officer in service. In a general hospital, he is not only physician and surgeon, but military commander, adjutant-general, quartermaster, and commissary for the sick and wounded under his care.

"To comply with the requirements of these widely different branches of the service, necessitates an intimate acquaintance with the routine work of the departments and a constant reference to the Regulations of the Army, and orders and circulars which have been issued by the War Department modifying the same. The latter are in many instances difficult to obtain, and the object of this work is to provide medical officers, and civilians who contemplate entering the service, with a synopsis of the duties required, directions for performing them, and, as far as practicable, with the forms at present in use.

"Under the heading *General Hospitals*, a description will be found of the re-

ports and returns to be made by the surgeon in charge, daily, weekly, bi-monthly, monthly, quarterly, semi-annually, and annually; together with directions for making out muster and pay rolls of the patients and attendants under his care, and such other details concerning the management of a military hospital as may be of practical benefit to him.

"The duties of the various staff departments, such as *medical inspectors, directors, purveyors, staff surgeons* and *assistants*, as well as *regimental* medical officers and *contract physicians*, are treated of as fully as the limited space in this book will permit, especial directions being given in the rendition of monied accounts by medical disbursing officers.

"Directions for making out *Certificates of Disability*, and *Final Statement* papers, for soldiers about to be discharged from the service on account of physical disability, are given at some length, as it is believed this subject is less understood (involving, as it does, a knowledge of the various bounties and allowances granted by Congress to soldiers) than almost any other which the medical officer has to deal with.

"The compiler has endeavored, in this little volume, rather to describe the *manner in which* the non-professional duties of the Corps shall be performed, than to suggest any improvement or innovation on the present system, and he trusts that the simple arrangement of the valuable facts which from time to time have been issued by the Department, will facilitate the labor of his professional brethren, and possibly relieve other departments of a portion of the labors with which they now are overburthened."

Lectures on Surgical Pathology, delivered at the Royal College of Surgeons of England. By James Paget, F.R.S. Revised and edited by William Turner, Senior Demonstrator of Anatomy in the University of Edinburgh. Third American Edition. Philadelphia: Lindsay & Blakiston. 1865.

The previous editions of this valuable work upon general pathology have been received by the profession in this country with deserved approbation, and although of late fallen somewhat behind our present views in some special branches, it has maintained a first place among similar works of reference in the library of both surgeon and student. The present issue, re-printed from the second English edition, has been reviewed by Prof. Paget and Mr. Turner, one of his former pupils, and the results of their studies of the writings and investigations of the new German school of pathology have been added chiefly in the form of frequent foot-notes to the original text. The appearance of the book reflects great credit upon the publishers.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, MARCH 23, 1865.

Fresh Air for the Working Class.—We have from time to time uttered our word of remonstrance and warning against the high-pressure system of education said to prevail in some of our public schools, and have felt that parents could not be put too much on their guard against the danger of overtasking the growing physical and mental energies of their children. Close confinement and exhausting drudgery in school are not, however, the only debilitating influences to which

the rising generation, especially of our laboring population, are exposed. The exhaustion arising from these causes might in a very great degree be counteracted and neutralized by exemption from study at home and free exercise in a pure atmosphere out of school hours. But here we are met by a difficulty which, under existing circumstances, is almost insurmountable. On conversing with parents of children whose symptoms seemed to be largely attributable to school confinement and tasks, and inquiring whether out of school hours they encouraged them to play out of doors, and to engage in active sports, so that their feebly expanded lungs and disused muscles might be brought into vigorous play, we have often received a negative answer. The moral influences of the crowded neighborhoods in which so large a proportion of the pupils of our public schools are compelled to live are such, that parents are unwilling to subject their little ones, especially the girls, to the unavoidable contamination to which they would be exposed if allowed to run at large in the streets. They shrink from bringing them into familiarity with the profane or impure language, or the coarse manners of many with whom they would inevitably come in contact. The open squares of the city, the Common and the Public Garden do very little to obviate this difficulty. They are most of them too remote from the homes of the class of which we are speaking to be made available to them as places of healthful recreation during the short interval of school intermission at noon, or after the afternoon session. It is true the great importance of out-door exercise for their children is not fully appreciated by too many parents of this class. They yield too much to the languid desire for rest indoors or an unhealthy passion for books, thus exposing their children at home to a similar enervating influence to that to which they are subjected at school.

These evils are very serious ones, and appear to be inseparable from the inevitable overcrowding of our larger cities. The discomfort of mean and insufficient residences for the working classes has been, to a certain extent, done away with by the erection, within a few years, of the model houses, so called. But even these commodious residences cannot obviate the special evils of which we are speaking. This can only be effected by a suburban residence somewhere among the numerous attractive country towns immediately about Boston. This subject has been so ably treated by a writer in the *Boston Daily Advertiser*, that we cannot refrain from transferring the whole article to our pages. We will only add that we agree most cordially with the writer, and sincerely hope his suggestion may be speedily acted upon.

"We are glad to find that the subject of homes in the country for laboring men who live in Boston is engaging more general public attention. As a matter of education, as a matter of health, or as a matter of morals, we conceive that it is a subject of the first importance to practical men.

"In the city of Philadelphia a man may hire a pretty house for two hundred and fifty dollars, well finished and substantially built, with every facility for water arrangements, gas and the other conveniences of modern life—the whole built on a lot one hundred feet deep. Is there any reason why, because a man works in Boston, he should be unable

to enjoy these conveniences, which have become necessities, unless he pays twice or thrice the price for them paid by his fortunate cousin in Philadelphia?

"The workman who lives in Worcester sees his boys grow up strong, tall and hearty—not oppressed by school work or other confinement. If he chooses he can cultivate the half acre or acre next his house, and provide his table with better vegetables than Mr. Crœsus or Mrs. Midas can buy in Faneuil Hall Market. When winter comes, if he chooses, he lays down his own pork for the winter. The year through he has eggs for his table, if his wife and children choose. And he does not pay so much for his rent as the workman we have described in Philadelphia. In practice, indeed, he buys his own homestead, and knows what "real estate" means.

"Now the Philadelphia workman and the Worcester workman both, very probably, live half an hour from their work. Every one can see that the Boston workman might, within half an hour of his work, have just the same advantages at the same price—if the railroad companies and capitalists would take this matter in hand on a scale of magnitude sufficient to offer these facilities to many people at once. There is land enough within ten miles of Boston for such homes as we describe in Worcester. All that is needed is that the arrangements for a large number of houses and gardens, at cheap rents, be made at one time at one place; for it is necessary that the morning and evening special trains shall be arranged to meet the specific working hours of the city.

"Let any railroad company, or any combination of shareholders, build such a village of a hundred houses, as will give homes and gardens to a hundred families at rents not exceeding one hundred and fifty dollars. The accommodation given could be made palatial in comparison with the crowded tenements in the city for which the same families are now paying from two hundred and fifty to four hundred dollars. Let the trains to Boston be arranged so that the workmen may meet the requisitions of a day's work. What they will gain will be, first, a chance for the education of their children under the open sky, and with good air and food—an opportunity which all the city missions, and ministers at large in the world cannot give them; second, an interest themselves in the direction of their own community, which the best man loses when he is one of a thousand huddled together in a crowded alley; third, opportunities of health, exercise, and personal improvement which would make, in a generation, an entire change in the physical stamina of our laboring men.

"The investment of a capital of two or three hundred thousand dollars in the establishment of such a village for the laboring men of Boston would be amply repaid in money, and it would be the beginning of a system of the utmost value to the town. Princes, large capitalists, merchants, clerks, and master-manufacturers are able now to use the railroad system with the advantages we have named. It is yet to be applied, on a sufficiently generous scale, for the equal or greater advantage of day laborers and mechanics who work by the day."

Dr. A. W. Wallace, in a valuable paper on the volumetric analysis of the urine, published in the *Dublin Quarterly Journal of Medical Science*, says:—

"It has become the practice with some to give phosphates in cases of disease of nervous tissue, and the plan was followed at the commencement of the treatment of Case I. Farther reflection, however, led to giving up the practice. If the phosphates are wanting in the urine it is not because they are not supplied in sufficient quantity to the system, for there is always abundance of them in the food. Either they are not assimilated at all, and are passing off some other way—in which case there is no reason to suppose that phosphate of zinc or iron would be better assimilated than the phosphorus normally present in the food—or, possibly, they are being used up in the construction of some abnormal growth, as chloride of sodium seems to be in the hepatizing lung of pneumonia, and then an additional supply of them would be positively injurious if absorbed at all. It may, however, be well doubted whether it is possible to supply phosphorus or sulphur to the tissue of either nerve or muscle by putting phosphates into the alimentary canal. It is probable that the phosphorus contained in the phosphates which are in the blood is on its way *out of*, rather than *into*, the tissues, and that it is introduced into them as an elementary part of the albuminoid components which pass into the blood as chyle. If this be true, then the administration of phosphates, with a view to their being assimilated, is useless."

We have received a communication from Messrs. J. R. Nichols & Co., complaining that our notice of their food for invalids was calculated to do them injustice, inasmuch as it was not offered for public notice, but a few specimens only were prepared and submitted to physicians for their judgment. As our opinion was asked in the note accompanying the package, we took it for granted that the article was before the public, particularly as it had attached to it a printed label of directions for use. The account of Liebig's soup for children accompanied the package, with the statement of the additions made to it by the Messrs. Nichols. We should be glad to see Liebig's preparation literally re-produced.

Dr. Brown-Sequard in Dublin.—During the last week much interest has been excited in Dublin by the visit of Dr. Brown-Séquard to that city, and the performance of a very formidable operation under the advice of that gentleman, the result of which is looked forward to with great interest. The operation to which we allude was the excision of a portion of one of the vertebræ in a case of partial dislocation of the spine from injury, and was performed by Dr. Robert Macdonnell, in Jervis-street Hospital. The very formidable nature of the operation made its performance a matter for the most mature consultation and deliberation. After examination of the case by Dr. Brown-Séquard, and in view of the absolute certainty of death as the only remaining alternative, it was determined to endeavor to relieve the symptoms of paralysis by operation. The vertebra, which was low down in the dorsal region, was, we believe, found to be twisted and compressing the cord, and portions of the laminæ were removed. Up to the present time we understand that a slight improvement in motive power, or in the incontinence of urine and fæces, has resulted. —*Canada Medical Journal*, from *Dublin Medical Press*, Feb. 8th, 1865.

Trichina Spiralis.—The Sanitary Commission has been making an inquiry into a very curious subject. The nature of it will be best understood by the mention of an occurrence that lately happened. A stout and apparently healthy Englishman was admitted into the Calcutta Medical College, suffering from an undiscoverable disease. It was found that he had trichina in a tumor in his neck, and he died. Trichiniasis is said to be rather common in India, and the great cause of it is diseased pork. The Sanitary Commission tell a revolting story of the way in which pigs, and even sheep, are fed in many parts of India. They get nothing but the most filthy description of offal, and then human beings eat the flesh, and get trichina spiralis. Some of the details are so unpleasant as to forbid narration; but those who know India and the personal practices of the natives will understand the full force of this statement by Dr. Gordon:—"In an incredibly short space of time after the villagers have left the field it is as if they had never been there, while the herd by which the clearance has been effected may be found in some shady place near, or close to a tank, with a few of the more insatiable that have gone to hunt for dead dogs, cats, cattle, and Hindoos that have paid the debt of nature since the previons meeting, and have been thrown or left on the plain to be devoured by domestic animals or vultures." English people will find it hard to believe that flesh thus fattened is used for food, yet it causes no surprise here. The Sanitary Commission say:—"In more than one official report received by the Commission these habits of India pigs are spoken of with something like actual approval, and one officer appears to consider that by the regular employment of pigs the necessity for entertaining conservancy establishments for the removal of filth may be to some extent avoided." Sheep are fed in this manner also. It may be necessary to add that in many of the principal stations in India the Europeans are safe from this danger, on account of the mutton clubs, which keep properly grain-fed sheep, and distribute the joints among the members. But in the large towns the servants buy meat in the bazaars without regard to what it has been fed upon. In a country where nature itself is always fighting against human life, we are obliged to live under conditions which would be thought utterly destructive in the most temperate regions of the globe. The food is bad, the water is bad, the air in the plains is like so much poison; the streets are foul with every kind of nuisance, drainage is impossible, the dead are left unburied, or just put an inch below the ground; and, in short, an army of hostile circumstances conspire against the health. The matter of food and drink has been taken up very warmly latterly, and that is owing, in a great measure, to the president of the Medical College, Dr. Norman Chevers. For years he has devoted attention to the subject, and often called attention to the evil.—*London Lancet.*

Death of Dr. Levi S. Bartlett.—Died, at Kingston, N. H., Feb. 19th, Levi Stevens Bartlett, M.D., aged 53. A writer in the *Boston Daily Journal* gives the following notice of the life of Dr. B.:—

He was son of the late Dr. and Judge Levi and Abigail Stevens Bartlett, and grandson of the late Dr. Josiah Bartlett, who was the first signer, after Hancock, of the Declaration of Independence. He

occupied the mansion built by the signer, in which are preserved with great care many relics which belonged to the early patriot, who perilled his life for his country, and whose remains rest in the village cemetery of Kingston. The deceased was born at Kingston, December 3d, 1811. He received his academical education at Phillips Exeter Academy, and studied medicine with his uncle, the late Hon. Josiah Bartlett, of Stratham, N. H., Prof. Elisha Bartlett, then of Lowell, Mass., and with Dr. John Barrett, of Portland, Me. He attended the medical lectures of Dartmouth and Bowdoin Colleges, and received his medical degree at Dartmouth in 1832, a short time before he was 21 years of age. Having come into possession of the landed estates of his father, with the mansion of his grandfather, he settled in Kingston, and became an eminent physician. But, on account of his health, for many years he had relinquished the practice of the profession, and lived quietly and modestly at home in the endearments of his family.

The Surgeon-General of the U. S. Army has ordered that in all cases, either in the hospital or on the field, in which death is supposed to result from the employment of anæsthetic agents, a detailed report of the attendant circumstances shall be made to the Medical Bureau. A sample of the drug employed will also be forwarded for analysis.

The registration report of the State of Rhode Island for the year 1863 shows the number of births in that State that year to have been 3,583—422 less than in 1862. More than 50 per cent. were of foreign and about 49 per cent. of American parentage. The number of marriages was 1618, an increase of 140 over the year previous. There were 3,207 deaths, or 600 more than in 1862.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, MARCH 18th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	49	30	79
Ave. mortality of corresponding weeks for ten years, 1853—1863,	40.0	36.4	76.4
Average corrected to increased population - - - - -	00	00	83.58
Death of persons above 90 - - - - - - - - -	0	0	0

COMMUNICATIONS RECEIVED.—The following communications have come to hand and will receive a speedy insertion:—A Case of Diphtheria; a Translation from Zeisl; a Case of Ovariotomy; and on the Treatment of Wounds of the Chest by Hermetically Sealing them

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MARRIED,—In Hartford, Ct., March 2d, Dr. A. J. Sawyer, of Cambridgeport, Mass., to Miss Emma B. Carrier, of Hartford.

DIED,—In West Newton, March 19th, Dr. J. H. Brown, aged 52.

DEATHS IN BOSTON for the week ending Saturday noon, March 18th, 79. Males, 49—Females, 30. Abscess, 1—accident, 2—aneurism of the aorta, 1—asthma, 1—disease of the brain, 4—inflammation of the brain, 4—bronchitis, 2—consumption, 14—convulsions, 2—croup, 1—cyanosis, 1—diphtheria, 2—dropsy of the brain, 2—epilepsy, 1—erysipelas, 2—scarlet fever, 2—typhoid fever, 1—hæmatemesis, 1—hæmorrhage, 1—disease of the heart, 3—homicide, 1—infantile disease, 2—insanity, 1—disease of the kidneys, 1—disease of the liver, 3—disease of the lungs, 1—inflammation of the lungs, 4—measles, 1—paralysis, 1—peritonitis, 2—pleurisy, 1—premature birth, 3—puerperal disease, 1—pyæmia, 1—rheumatism, 1—smallpox, 1—unknown, 5—whooping cough, 1.

Under 5 years of age, 26—between 5 and 20 years, 8—between 20 and 40 years, 23—between 40 and 60 years, 9—above 60 years, 13. Born in the United States, 49—Ireland, 20—other places, 10.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. LXXII. THURSDAY, MARCH 30, 1865. No. 9.

GUN-SHOT WOUNDS OF THE THORAX. IS THE TREATMENT BY HERMETICALLY SEALING THEM JUSTIFIABLE?

[Communicated for the Boston Medical and Surgical Journal.]

MESSRS. EDITORS,—Medical writings are full of exploded theories. It seems to be thought necessary, to complete the history of any subject, that those who treat of it should tell not only what is known to be true, but also what has at any time been thought to be so by ingenious theorists. This is much to be regretted, since, although a disclaimer may be finally made, the very statement of the fallacy makes a certain impression and influences practice. I am led to make these remarks by observing very recently in the Essay on Gun-shot Wounds by Dr. Becker, published in your JOURNAL, and also in the Military Surgery of Prof. F. H. Hamilton, elaborate statements of the plan of hermetically sealing gun-shot wounds of the thorax. In both cases the writers express, finally, their doubts of the wisdom of such practice. And well they may if they have ever seen its effects! Yet many students may get the impression that this is one of the approved methods of treatment.

In July, 1864, it came in my way to see six cases at one time treated in this manner at the field hospital of the 18th army corps, before Petersburg. All six promptly perished.

The verdict of Army surgeons who have tried this method I think is unanimous. Can we not then be done with it—banish it from our books of military surgery, and let it rest with the multitude of exploded theories which have preceded it?

A writer in the London *Lancet*, some time ago, clearly showed that it was unphilosophical. Experience has proved it fatal.

I have had under my charge, during the past three years, a good many recent gun-shot wounds of the thorax, all of which were treated with simple dressings and perfect rest, and I believe at least one third of the whole number made good recoveries. I cannot help thinking that frequently wounds classed as those of the thorax have

also penetrated the diaphragm, and death has resulted from peritonitis. Allowance may not always be made for the convexity of the diaphragm, and in the multitude of cases calling for the surgeon's attention in hospitals in the field, but little time is given to autopsies.

Truly yours, GEORGE DERBY,
Surgeon U.S.V., in charge Cony Gen. Hospital.

"Cony" U. S. Gen. Hospital, Augusta, Me., March 12, 1865.

PATHOLOGY AND THERAPEUTICS OF ACUTE CATARRH OF THE BLADDER.

BY HERMAN ZEISSL, PROFESSOR AT THE UNIVERSITY OF VIENNA.

[Translated for the Boston Medical and Surgical Journal, from a pamphlet issued in 1863.]

THE bladder is, owing to its position as an intermediate organ between the ureters and the urethra on the one side, and by its connection with the prostate on the other, subjected, outside of its idiopathic affections, to numerous diseases transmitted from neighboring organs.

There is also a difference to be recognized between the catarrhal affections of the bladder, as idiopathic and as arising from transmission. As to what relates to extension or transmission of the catarrhal affection of the bladder, we learn by experience that catarrh of the bladder arises in most cases through participation with the catarrhal affection of the urethra, and less frequently from affections of the other pelvic organs.

We desire in this article to confine ourselves principally to that catarrhal affection of the bladder which is dependent upon a similar affection of the urethra. Clinical experience teaches that gonorrhœa leads frequently to disease of the bladder. Generally, the bladder becomes affected in consequence of gonorrhœa when this disease has attacked the posterior portion of the canal or affected the prostate. Such are the well-known cases usually designated as chronic or secondary gleet. As it is generally only after weeks duration of gonorrhœa that the portion of the urethra nearest the bladder becomes affected, so a similar interval occurs before the bladder becomes diseased. There are cases, however, where only a few days after the commencement of the gonorrhœa a catarrhal affection of the bladder is established. Before we begin a more precise description of the semiotics of this disease of the bladder, it is necessary to observe that the disease does not affect the entire surface of the bladder, but only the so-called neck. The indications that only this portion of the bladder is sympathetically affected, are given by a remarkable functional disturbance of the organ. Micturition becomes extremely painful, and is often so distressing that, under the violent tenesmus, the patient is obliged frequently to micturate every ten minutes. If he yields to this desire, he generally passes only a

few drops of a very acid urine. Should every single drop cause pain as it leaves the bladder, the last will be of such a violent kind that, as the patient expresses himself, it seems as if the penis became spasmodically drawn back against the os pubis, so as to be in a half erect condition.

The passing of the few drops of urine proceeds so slowly that patients sometimes involuntarily pass the urine in bed. Should this complaint be not properly recognized, the patient becomes subject to disturbance of the digestive organs, accompanied by fever and other severe symptoms, which cause great alarm to him and to the inexperienced physician. Up to this time the small quantity of urine passed continues clear, and only after long standing shows a sediment of epithelium and mucus; but at a later period it shows a small quantity of blood, usually forced, after the urine has passed, in a few drops from the bladder. This hæmaturia is caused by the protecting epithelium becoming separated from the inflamed mucous coat of the neck of the bladder, so that the capillaries are laid bare and subjected to forced straining of the neck, by which bleeding is produced. If, under this condition, we examine more carefully, we find that the abundant muco-purulent secretion which was first formed has considerably diminished, and has yielded to a more serous discharge. It produces at the mouth of the urethra, when the patient has been able for some time to resist the desire to urinate, a sticky serous secretion, similar to that observed in a violent catarrhal affection of the mucous membrane of the nose. If we examine the body of the bladder above the os pubis, it presents no sensitiveness to pressure even with considerable force; a digital examination per rectum, although no enlarged prostate can be felt, will produce intolerable suffering by pressure upon the sensitive portion of the urethra. From such an examination one has the right to conclude that the entire surface of the bladder is not affected, but only the forward part—that is, the neck.

As we have already remarked, clear urine, or at most presenting but a few drops of blood, will always be passed during the catarrhal affection of the neck of the bladder, in spite of the violent tenesmus. It therefore happens, as the disease advances over the entire mucous coat of the bladder, that before the first drop of urine passes blood has already preceded it. It is natural, therefore, that the urine which passes afterwards should be no longer clear, but turbid by means of this bloody muco-purulent secretion. As is well known, the mucous secretion of the bladder causes fermentation in the urine; carbonate of ammonia, therefore, becomes developed in the bladder, and in such cases will give the urine an alkaline re-action. At this stage of the catarrh, so far as intensity is concerned, an increase of the disease is possible. Although the urine, after cooling, precipitates up to this time only a muco-purulent sediment, this will, by the further progress and continued separation of the mucous lining, reach such

a state as to fill the urine with lumps of pus, mucus and blood. The muco-purulent deposit in the urine during the extreme stage of the disease, presents a flocculent or jelly-like condition—an appearance which is produced by the carbonate of ammonia formed in the urine, with the pus and mucous secretions. If we pour ammonia over pus and mucus, we produce a similar stringy, jelly-like substance. While the urine in the earlier stages produces an alkaline re-action, it will, after standing some time, give off a disagreeable, ammoniacal odor. It gives off, in those cases where the affection of the bladder has reached the last-mentioned stage, even when just passed, such an ammoniacal smell that one is justified in supposing that it is undergoing a foul fermentation in the bladder. This last condition, usually denominated blennorrhœa of the bladder, is a less frequent result of blennorrhœa of the urethra, but is more commonly attendant upon a violent stricture of the urethra which has had its origin in a blennorrhœa of that canal. While the two earlier stages of this affection of the bladder depend only upon a transmitted pathological change in the mucous membrane of the bladder, the blennorrhœa produces such an hypertrophy of the muscular coat that the single bundles of fibres have the appearance of the columnæ carneæ of the heart—a condition called by the French "*la vessie à colonne.*" So long as the neck of the bladder is alone affected, so long is the anatomical change of the mucous parts scarcely to be perceived; but when the affection extends to the entire mucous membrane of the bladder, an anatomical change occurs in the mucous and muscular coats which can never be entirely removed, and which leads to a permanent functional disturbance of this organ. We therefore may consider the catarrhal affection of the neck of the bladder as an acute catarrh of the bladder; while in the affection of the entire thickness, the muscles become involved and the disease takes on a chronic character. The ordinary duration of the catarrh of the bladder contracted from a blennorrhœa of the urethra is, under proper care, from eight to twelve days; but may, however, under certain conditions, continue much longer, if by some accident or injurious influence a renewal of the inflammation takes place. This may be caused by hæmorrhoids, from the proximity of the branches of veins and the venous network which surrounds the bladder and rectum. And as it may be caused by hæmorrhoids, so may it arise from a passive hyperæmia of the bladder.

Causes of the Acute Catarrh of the Bladder.—As already mentioned, the acute catarrh of the bladder arises from an extension of a blennorrhœa of the urethra to the bladder. There are, however, influences which are more less favorable to the further extension of the disease. Such are the drinking of new, unfermented beer, must, or champagne wine. The too frequent drinking of soda-water, which has of late years become so fashionable, is also injurious. Experience has taught us that the use of fermenting drinks has an injurious

effect upon the neck of the bladder of even healthy persons. There are well-known cases of numerous individuals who, after drinking a badly fermented beer, have been seized with dysuria, at times amounting to ischuria. Some hours after partaking such drinks, these individuals have the continual desire to pass urine, which, coming away only by drops, shows, after cooling, a mucous precipitate. Often in those districts where, during the autumn, the apple must is drunk in the greatest quantity, the larger part of the younger male portion of the villagers become affected in this manner. With us here in Austria, where great quantities of apple must and apple wine are likewise drunk, it has commonly been known as the cider disease. Next to the above-mentioned drinks, there are certain medicinal injections which I believe may develope an acute catarrh of the bladder; as, for example, the use of terra catechu or sanguis draconis in the acute stages of the blennorrhœa of the urethra. Some well-skilled medical authors claim to have seen a similar injurious influence from injections of copaiba and cubebs. I cannot conceive myself, as yet, of such a thing, although I remember seeing in one case an inflammatory condition of the neck of the bladder coming on after an injection of balsam of copaiba. I can, however, conceive that by an unskilful injection, with only a half-filled syringe, by which air may be forced into the bladder, tenesmus may be produced which may cause all the symptoms of an acute catarrh of the bladder.

Very frequently an acute catarrh of the bladder is produced by the passing of catheters and bougies. It has long been known that the neck of the bladder, and likewise the *verumontanum* or *colliculus seminalis*, is the most sensitive part of the urinary apparatus. And it happens not unfrequently that the strongest man faints from an intense pain caused by the passing of the instrument over the *caput gallinaginis*. If the surrounding parts are besides already inflamed, as by an extended blennorrhœa of the urethra, it is extremely easy to make the catarrhal affection worse by an instrumental excitant. Coitus during gonorrhœa will frequently be punished by an acute catarrh of the bladder. A forced ride will likewise produce it, by injury to the prostate.

Prognosis of Acute Catarrh of the Bladder.—Acute catarrh of the bladder will, with proper care, when it arises from gonorrhœa, be cured; disappearing with the last sign of the gleet. Not unfrequently does the catarrh extend to the seminal canal, producing a catarrh, or an epididymitis. If the acute condition returns frequently, it is apt to produce locally a permanent change; not unfrequently a permanent growth of the point of the *trigonus lieutaudi*, or *la luette vesicale* of Amussat, which may prevent the passing of the secretions. More frequently than this, according to my knowledge, is a diseased condition very seldom spoken of by authors, namely, a permanent hyperæmia of the *colliculus seminalis*, which is noticed during the life of the patient at the moment of ejaculation during sexual excitement, by

an intense pain, as if a heated needle were passed through the perinæum. In other cases the catarrhal process extends merely to the vesiculæ seminalis, causing such a relaxation of them that the accumulated semen becomes forced out, by the slightest pressure by the contents of the rectum, through the urethra (spermatorrhœa). The catarrhal process extends itself at times to the outlet of the prostate, so that several of them will continually throw off its peculiar secretion mixed with mucus, which will be passed by the urine in the form of a stringy secretion. Although as a rule, as has already been said, the acute catarrh passes off without any particular injury, it may, at times, produce extremely unpleasant consequences.

Therapeutics.—In the treatment of acute vesical catarrh, rest and a proper diet are of paramount importance. The patient should remain in his room, even if he is not obliged to keep his bed. An equable temperature is necessary, that a part of the aqueous secretion may pass off by the skin that otherwise would have to pass by the urethra. The diet must be regulated according to the degree of fever. Should there be considerable fever, the patient should be restricted to a soup diet. For drink, the patient should take decoctum seminum lini or an emulsion of canabina, with or without syrup diacodii. We cannot say, however, whether any of these oleaginous or mucilaginous substances pass into the urine or not. Their influence may be merely to make the urine more watery. The principal object in the treatment is, to relieve the patient from the incessant desire to micturate; this is more properly effected by the administering of an anodyne, either inwardly or topically; and for this purpose we cannot do better than to use opium or morphia—constipation being carefully guarded against, as every passage of fæces by an inflamed prostate is to the patient extremely painful. In order to dilute the urine of the patient, and to introduce a narcotic into the system, we have succeeded for years by the use of herba herniariæ glabræ, a plant which without any good reason has become almost entirely obsolete. This plant belongs to the papilionaceæ, and grows wild with us. It is a mild diuretic, and contains a narcotic principle, which I can bear witness has almost a specific influence upon the sphincter muscles, without paralyzing or obstructing their action. A similar, although weaker drug is the chenopodium ambrosoides; and I prescribe for such affections the following:—
℞. Herniariæ glabræ, chenopodii ambrosidis, aa. dr. tres. Div. in doses æq. No. viij. One of these portions should be infused in a saucerful of boiling water, to which milk and sugar may be added.

When it is possible, we poultice the perinæum and those parts in the neighborhood of the bladder. After a moderate quantity of the tea has been taken, the urination becomes remarkably easier. By way of a parenthesis, we would remark that we cannot recommend this plant too highly in chronic catarrh also. We can, as we have said already, assist the action of the herniaria by topical narcotics; for

which purpose we may apply a cataplasm of cicuta, and in urgent cases a suppository of the extract of belladonna as follows:—℞. Ext. belladonnæ, gr. i.; butyr. simpl. et butyr. de cacao, aa ʒ ss. M. Ft. suppositoria, No. iv. One of these is to be carefully passed up the rectum morning and evening. If there should be constipation for several days, I generally give a clyster of ol. ricini. If at times painful excretions take place, we must try to obviate them by lukewarm cataplasms of conium. Should retention of urine occur, we must try to overcome it, if possible, without long delay, by introducing a conical moderate-sized elastic catheter with a bulb upon its end. The catheter should be well oiled before passing, and should be allowed to remain in the bladder for half an hour. The so called *bougies à demeure* are very seldom borne by the patient in this case. Before I close, I feel it my duty to call attention to what has almost become a traditional misconception of the treatment of this disease in medicine. In most text books, chronic catarrh of the bladder is in most cases treated after one rule; namely, by the use of potassa or kali carb. either in the form of a solution or soda water. My experience teaches me to speak decidedly against this custom. I have shown that similar diseased conditions are frequently produced by the partaking of beer, must, &c. The explanation of their action may be found in the laws of Wöhler, as where alkaline salts or acetate of potash are introduced into the blood, they become transformed into a carbonic oxyde, which I believe to be the injurious element in the above-mentioned drinks, and which would be increased by the addition of these carbonates; as I have seen a decided tendency to grow worse with such patients in my practice where carbonic acid drinks were administered. Equally unprofitable is the use of the decoction fol. uvæ-ursi and all other astringent medicines in the acute catarrh of the bladder. All such medicines containing carbonic acids, and the mineral waters of Preblau, Gieshübel, Franz-bad, Güstein, Karlsbad, &c., are to be kept from such patients as are affected with chronic catarrh of the bladder. ?

FATAL CASE OF DIPHTHERIA BY INOCULATION.

[Communicated for the Boston Medical and Surgical Journal.]

In the latter part of last summer, I was called to Washington Centre, six miles distant, to visit W. B. S——, æt. 30, lawyer by profession—and from him learned the following facts:—His sister had recently died of a very malignant type of diphtheria, in the neighboring town of Stoddard. She was sick but a few days, and during this time Mr. S. assisted in taking care of her. A few hours before her death, she vomited, and a portion of the matter ejected from her stomach came in contact with an abraded surface upon one of his fingers. This occurred on the 25th of August, I think. No notice

was taken of it at the time, neither did it occasion any alarm until the second night afterwards, when he was awakened from his sleep by excessive pain in the part. On the 29th I was called to visit him, and found him laboring under the following symptoms:—pulse 110; skin hot and dry; tongue covered with thin white coating; hand, and especially the finger that received the poison, very painful and excessively swollen; some tenderness of arm, with reddish lines following the course of the veins. His throat was not particularly involved at this time. In brief, he had evidently contracted diphtheria by *inoculation*. On my next visit, the following day, the characteristic exudation had appeared upon the tonsils and adjacent structures, as I had predicted to the friends would very soon occur. The treatment consisted essentially of stimulants and tonics, varied as circumstances seemed to demand, emollient poultices to hand, with caustic and various gargles to throat, &c. But in spite of all our efforts, he—though previously a stout, healthy person, rapidly sank, and died about the twelfth day after receiving the infection—previous to which his throat became cleared of all exudation. He was entirely overcome by the intensity of the poison, and death took place purely from exhaustion.

I have thus briefly sketched a few of the outlines of this case, from memory, more especially to show the manner in which the disease was contracted. Greenhow, in his work on diphtheria, makes no mention of this manner of propagating the disease, neither do Dr. James Wynne nor Prof. Chapman in their papers on diphtheria, and not having read any account which mentions it, I have thought this case worthy of a brief record. It gives to my mind conclusive evidence that diphtheria can be contracted by inoculation, which fact it is important to know in addition to its other terrible features, when occurring in an epidemic form. S. M. Dinsmoor, M.D.

E. Washington, N. H., Feb. 22, 1865.

ON THE USE OF ARSENIC.

By Dr. Cummins, President of the Medical and Surgical Society of Cork.

There are few medicines the strikingly beneficial effects of which are more obvious than those of arsenic.

An inveterate skin disease, which had, perhaps, for years tormented its victim, placing him almost as far beyond the pale of society as did the leprosy of old, fades away imperceptibly under its use, and enables the quondam sufferer to pay grateful homage to the healing art; or the worn-out subject of neuralgia, habituated to sleepless nights, and tortured restlessness, casts off the chain that had bound him to suffering, and thankfully acknowledges that to arsenic he is indebted for repose and comfort. Or some intractable intermittent, which quinine had failed to remove, is speedily banished from the system

by the same means; or the spasmodic contortions, which render the victim of chorea a caricature of humanity, acknowledge the power of this remarkable therapeutic agent, which restores the free and voluntary play of nerve and muscle. Nay more—in these, and many other diseases, not only is the local malady removed, but the tonic power of the medicine is felt in every part of the system. Would that we could say—all these triumphs of our art are achieved without danger!

Arsenic, as a medicine, is generally used in small and frequently repeated doses, continued often for a very considerable period. We are told by some authorities that it is not cumulative; and as this opinion was gravely maintained by a practitioner of considerable experience at a coroner's inquest, to which I shall presently allude, I think it well to occupy a little of the Society's time with the discussion of a question of such *vital importance* to all who undertake to administer arsenic in disease.

Dr. MacSwiney stated, before the Surgical Society of Ireland (see *Dublin Medical Press*, May 6th, 1863) that in a celebrated trial, which took place in France, there was a great discrepancy of opinion as to whether arsenic is cumulative or not—Danger, Flanden, Orfila, and other eminent toxicologists, maintaining that it is. But, instead of occupying your time with authorities on the subject, I shall discuss it on its own merits. And first—what do we mean by the cumulative action of medicines? Dr. Fleming, in the following passage *(Edinburgh Medical Journal)* states it to be "the gradual increase of physiological action from the successive exhibition of equal doses. When a second dose is given, before the effects of the first have passed away, we add to what remains of the action of the first the full operation of the second, and so on with the third and subsequent doses, until finally the sum of effects exceeds the limits of medicinal, and passes into those of poisonous action." Now I believe all authorities admit that when arsenic is continued in small doses for a time, it may be weeks or months, certain physiological effects are produced; and, according to Dr. Fleming's definition of cumulative action, this admitted fact ought sufficiently to establish its cumulative power; for if the first dose does not produce the specific effects, and subsequent ones do, it follows that one dose must overtake the other within the system; and further, if physiological effects can be thus produced, it is only a question of time as to whether toxic effects may not follow.

However freely a medicine is eliminated from the system, a certain time is necessary for its elimination; and if, previous to that given time, a second dose is exhibited, there must be cumulation. Well-known facts also prove that free elimination does not prevent cumulation. For instance, few medicines run off more freely by skin, stomach and bowels than tartar-emetic, and yet the system learns soon to tolerate its presence, and allow large quantities to

remain within it—witness the late cases of criminal poisoning with that substance—so we may, I think, admit that the freedom with which arsenic is eliminated is no proof that it cannot accumulate.

The fact which stands out most prominently in opposition to the hypothesis that arsenic is cumulative is the alleged habitual indulgence in its use, even in daily quantities of from two to four grains, by the natives of Bohemia, Silesia, and some parts of the Austrian Empire, who, it is said, take it to invigorate the system, to improve the power of the respiratory organs, and to increase their powers of endurance (see *Dublin Medical Press—ante cit.)*; but while we admit that these effects may be produced by it, and may be sufficiently appreciable to induce the ignorant to continue its use, just as the stimulating effects of alcohol lure on many a victim to destruction; yet, in the absence of the fullest information, this cannot be used as an argument against what reasoning would lead us to expect, and what well-ascertained and well-authenticated facts establish.

The facts I have yet to mention are some of them quoted from various sources, some are my own. They demonstrate two things—1st, that arsenic is a slow poison; and 2d, that it is a cumulative one; the difference between a slow and a cumulative poison being, that one, when given in continued small doses, produces effects different from the ordinary poisonous action of the agent; while the other, when similarly administered, suddenly causes the symptoms of a full dose at some uncertain interval of time.

In the *Dublin Medical Press* (May 6th, 1863) we find a most interesting case, recorded by Dr. John Barry, among the *Surgical Society's Transactions,* of a lady who, during a course of arsenic, under the observation of a London practitioner of great experience in the use of this medicine, was suddenly attacked with paralysis of both hands and feet. Ten years of protracted suffering and broken health followed, and then small black masses appeared imbedded in the skin, around an ulcer on the leg; these, on being analyzed, were found to consist of arsenic, and the hitherto ineffectual struggle of her constitution with the poison thus ended in the triumph of the former.

Several gentlemen took part in the discussion which followed the reading of this case; and Dr. Macnamara related a case in which arsenic, having hardly affected the eyelids or fauces, produced such intense diarrhœa that death was only warded off by powerful stimulants. Dr. H. Kennedy also related a case where a single application of arsenic produced a very severe form of paralysis of both hands and feet.

Dr. Hastings, of Worcester (*Provincial Medical Journal*, August, 1848), relates the history of a patient who, after taking from three to five drops of Fowler's solution, thrice a-day for some weeks, suffered from great weakness, and partial paralysis of both upper and lower extremities, with burning pains in feet, &c. Dr. Turnstile, of Bath, followed it up by the case of a young woman who took three

minims of liquor arsenicalis for seven days, and became thoroughly prostrate, with peculiar glassiness of the conjunctiva; and another where the same medicine, taken by a young man, produced lassitude and incapacity for active exertion, reproduced by any slight cold. Dr. Erichsen (*Medical Gazette*, May, 1843) mentions the case of a young lady, of highly nervous temperament, but otherwise perfectly healthy, and without hereditary predisposition, who took Fowler's solution, and, as a consequence, suffered from extensive derangement of the stomach, followed by a violent neuralgic attack, and, at a subsequent period, a distressing train of hysterical symptoms, which terminated in a state of what might be called hopeless dementia.

Dr. Burne has reported the case of a young lady who took, in divided doses, in three days, one fifth of a grain of arsenic; symptoms of inflammation of the stomach, and alarming symptoms of a nervous character appeared (*Taylor's Medical Jurisprudence*).

Last spring I was, myself, consulted by a gentleman who gave the following history of his case:—He had suffered for a long time from a scaly eruption of his ear, and had in vain used various applications, and taken much medicine—when a book, written by a London surgeon, strongly recommending the use of arsenic in skin disease, fell in his way. Its perusal so interested him that he corresponded with the author, and was ordered arsenic. This he continued, in doses of from three to six drops of Fowler's solution, three times a-day for two months, when the disease rapidly yielded to the treatment; and as there was tingling itching, and partial desquamation of the hands and feet, the dose was reduced, and continued thus for another month, when I was sent for in consequence of great irritation of the lower extremities, and symptoms of inflammation of the stomach having set in; and it was only by great care and active treatment that he was restored to comparative health. I met him this day (April 13th), and he assured me that he has never since felt as well, or as equal to active exertion as before. These, and other cases that might be brought forward, prove that arsenic is a slow poison; that, like lead, mercury, silver, alcohol, &c., it remains long in the system, differing altogether from such poisons as tobacco and opium, which, when continued for a long time, produce injurious effects, due rather to a chronic influence upon the nutrition of the body, than to gradual accumulation within it. The following case is somewhat different from those I have related, as, instead of producing a slow poisoning, arsenic, in divided doses, continued for months, without, as far as we are aware, any but beneficial effects, suddenly, and without any known cause, exhibited the appalling train of symptoms which characterize the full toxic effects of the mineral; it is a case paralleled only by the action of strychnia, digitaline, and such deadly alkaloids, which, whether from insolubility, impaired digestion, or through accumulation, after being taken for some time with impunity, occasionally terminate life in a few hours.

At 4, A.M., on the morning of the first of April, I was called to see a man, aged 40, suffering from vomiting and diarrhœa. His friends informed me that he had been in good health the previous day, had taken nothing to disagree with him, and had returned home at the usual hour to supper, but felt disinclined to partake of it. At 7, P.M., vomiting commenced, and shortly after diarrhœa, both continuing up to the time of my visit. He was then lying on his back, extremely prostrate, cold, pulseless, and thirsty; he had taken punch and brandy, which had failed to stimulate him; he was perfectly conscious, and answered my questions in a distinct and natural voice; the pupils were dilated; the surface of the body was cold and dark colored; hands blue and corrugated; countenance pinched and anxious; there was great tenderness of epigastrium and abdomen generally; tongue was white; the breath was not cold, and there were no cramps. Vomiting and diarrhœa did not recur during my visit, and all the discharges had been thrown out.

I prescribed medicinal and alcoholic stimulants freely, and opium cautiously. External warmth was applied, and such other ordinary treatment as seemed indicated. I saw him again at 10, A.M. He was then in much the same state as before, except that the body and extremities had regained their warmth, and that the respiration was short and hurried.

Diarrhœa and vomiting had returned during my absence, and the discharges had been kept for me; those from the stomach were of a reddish brown, and the stools consisted of a reddish serum. He died shortly after.

I was not aware that this poor man had been taking medicine of any kind, as it had not been mentioned to me. However I thought the case suspicious, as although death might have been caused by perforation of some internal viscus, or by cholera, there was a sufficient amount of dissimilarity from the symptoms and course of such affections, as well as so close a resemblance to those of irritant poisoning, as to make an inquest necessary. It was not until afterwards that I ascertained the true history of the case, which was as follows: The patient had long suffered from an intractable skin disease, affecting one of his legs; and his master, a non-practising physician, who had read Mr. Hunt's book, and become deeply imbued with his views as to the value of arsenic, had, with the concurrence of another medical gentleman, ordered him about three minims of Fowler's solution, three times a-day, cautioning him immediately to report any affection of the conjunctiva, or other physiological effect of arsenic.

The poor man derived such benefit locally and generally from the medicine that he became deeply enamored of it, continuing to take it steadily for about ten or twelve months. We all know the recklessness and hardihood of the Irish character, and can easily believe that slight discomfort about the eye, throat and face, such as arsenic produces, might have easily existed unnoticed, or uncomplained of,

and thus the medicine been permitted to accumulate until the symptoms of poisoning, by a large dose, were suddenly manifested.* I have no doubt whatever that the patient was thus poisoned; and I gave evidence to that effect at the inquest. Unfortunately, however, there was no *post-mortem* examination of the body to bear me out; as the jurors, who were principally uneducated laboring men, stood in awe of ordering their friend "to be cut up in pieces like a felon, and sent to a chemist to be analyzed," as a medical gentleman, who was present, told them would have to be done if there was an examination. I was the only material witness; and I testified as above, that, in my opinion, deceased died from arsenical poisoning. Nevertheless seven of the jurors gave a verdict in direct opposition to the evidence. So much for inquests! The verdict, however, would probably have been different had the case been a criminal one; but under the circumstances there was no great need for close investigation. The lesson it teaches, however, is too valuable to be thrown away.

I have read Mr. Hunt's book, as well as several of his papers, which, from time to time, have appeared in the medical journals, and I think his mode of exhibiting arsenic most judicious, and far less dangerous than the old method of prescribing gradually increasing doses. It is the one I always adopt myself, and I have never seen disagreeable effects follow. During a course of arsenic the patient should be frequently seen and closely examined. The peculiar silvery whiteness of the tongue, described by Dr. Begbie (*Ed. Med. Journal*) is exceedingly characteristic of the first constitutional influence of the medicine, and is seldom absent; it is soon followed by swelling of the face, redness and itching of the conjunctiva and eyelids, dryness of the fauces, and occasionally by the horizontal red line within the lower lid, described by Mr. Hunt. The moment any one of these symptoms is recognized the dose of arsenic must be reduced, and *under no circumstances* should it be continued for many consecutive months, as it would seem from the cases I have mentioned, and others, that after a time the excretory organs become habituated to its presence, and are insusceptible of the amount of irritation which the constant excretion of an abnormal product demands. In this particular arsenic seems allied, in its physiological action, to nitrate of silver, which, we know, will never accumulate under the skin in sufficient quantity to discolor it, if its administration is suspended from time to time.

With all the precautions I have mentioned, however, the use of arsenic is occasionally attended with some risk; for not only is it, at times, liable to exacerbations, remissions, and intermissions in its action (Dr. A. Thompson), but certain constitutions will not tolerate the smallest dose with impunity. Such idiosyncracies, of course, are

* Since the above was written, I have heard from the man's master that none of the physiological effects of arsenic could have occurred, as he examined him constantly.

very exceptional, and might be urged with equal justice against mercury, which, in almost infinitesimal quantity, sometimes salivates a patient; it is well, however, to bear them in mind, and increase the caution which it behooves us to exercise in all operations where human life is at stake.—*Dublin Quarterly Journal of Medical Science.*

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

JAN. 23d.—*Apoplexy.*—Dr. SHATTUCK showed the specimen. The patient, a man 45 years old, a seaman, was brought into the Massachusetts General Hospital, January 4th, hemiplegic (on the right side) and semi-conscious, having fallen in a fit after a debauch. The pulse was 56, respiration 20. He remained in the same state until Jan. 19th, when he suddenly became much distressed for breath, lost his consciousness entirely, and died in a few minutes.

The surface of the arachnoid was dry, and the convolutions were flattened, over the left hemisphere, which also projected beyond the median line. In the left hemisphere, just outside the corpus striatum and optic thalamus, was a cavity, upwards of an inch in diameter, filled with blood and coagulum of a dark-brown color. The walls were ragged, and the cerebral substance for a number of lines around was dark brown, or where it joined the healthy tissue quite yellow, which color in places extended nearly to the surface. The corpus striatum and optic thalamus were partially destroyed, but no blood had entered the ventricles. The large arteries at the base of the brain were stiff, but showed no other sign of disease. The brain elsewhere appeared normal. The heart was rather soft. Under the microscope the fibres were seen to be slightly fatty. The other organs were healthy.

FEB. 13th.—*False Membrane from the Pleura, containing a large Cavity.*—Dr. SHATTUCK showed a dense, yellowish-white, fibrous mass, within which was a large cavity, filled with clear serum, which was removed from the right pleural cavity of a woman who died shortly after entering the hospital. It was attached to the posterior wall of the right chest, extending from the apex nearly to the base, and from the spine to a point four inches beyond it, at its widest part. The walls of the cavity were from two lines to half an inch in thickness, very dense externally, and within soft, friable, irregular and easily broken. The pleural surfaces on both sides were universally adherent. The right lung was quite small, and so much compressed that most of it sank in water. The left lung was small, but not otherwise diseased. The heart and the kidneys were somewhat fatty. One ovary was converted into a sac three inches in diameter.

The patient was brought to the hospital in the evening, and presented no appearance of serious illness; but about midnight she called the watcher, saying that she was dying. The bronchia seemed filled with secretion, she labored for breath, and died in two or three hours.

Feb. 13th.—*Pericarditis; sudden Death from valvular Obstruction.*—Dr. Shattuck showed a heart from a patient who died suddenly, apparently from obstruction in the tricuspid valve. The pericardium was adherent by means of recent lymph. Between the right auricle and ventricle, passing through the tricuspid valve, was a long, firm clot, which presented a decidedly old appearance. The colon, throughout its whole extent, was enormously distended with gas.

The patient was a girl, 17 years old; parents healthy; healthy herself, and well developed. Came to this country in 1864, and two weeks after arrival had rheumatic fever for five weeks. Has been perfectly well since till ten weeks ago, when she had rheumatic pains in legs and arms. Was exposed to cold, Jan. 24th; being unable to work, and suffering much on the 25th, came into hospital on the 26th.

Jan. 27th.—Pains in joints and muscles of extremities, confining her in bed, and keeping her awake in the night. Pulse 92, thermometer 102. No thoracic symptoms.

29th.—First sound of heart replaced by a slow murmur. Increased cardiac dulness. Pulse 116, small and regular. Thermometer in axilla, 103°.

30th.—Murmur loudest at right apex. Both sounds can be heard at base. Orthopnœa. Thermometer at evening, 105°: pulse 120.

Feb. 4th.—The murmur has nearly disappeared. Was comfortable, free from pain, and breathing easily, till night of Feb. 6th, when she had paroxysms of dyspnœa, in one of which she died, early on the morning of the 7th.

Feb. 13th.—*A large mass of coarse Thread ejected from the Stomach.*—Dr. Jackson showed the specimen, and reported the history of the case, the main facts of which he had received with it from Dr. James W. Robbins, of Uxbridge.

"The patient was a young factory girl, and was in the habit of biting off and swallowing pieces of thread. Being dyspeptic, her mother gave her an emetic, and she vomited a little of the thread, which was thrown away. Afterwards some of it came up in her throat and was again swallowed. Dr. R. was then called and gave an emetic; and, when the mass came up in the throat, he caught it, had her head held back, and easily withdrew the whole, although such was the size of the mass that the centre of it must have actually distended the œsophagus. The weight, at first, was 4 oz. (avoir.), but it diminished, on being dried, to 4 drachms 26 grains. The patient was soon relieved of her dyspeptic symptoms, and is now a healthy married woman, the case having occurred many years ago."

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, MARCH 30, 1865.

The Purification of the Press.—The London medical journals have entered upon an earnest crusade against the growing indecency of the public press in admitting to their columns the obscene advertisements of quacks, which promises the most satisfactory results. Already

many of the leading papers throughout the kingdom have signified their intention to exclude such matter from their columns in future, and public opinion seems at last thoroughly aroused to the enormity of this offence against decency and morality. The immediate occasion of this healthy movement was the late exposure in the courts, by a victim of these extortionate quacks, who possessed a rare moral courage, of their nefarious system of robbing. Its success is all the more gratifying, as it suggests the possibility of similar reformation this side of the Atlantic. How much it is needed here need scarcely be told. We have but to look at the entire surface of some of our journals to find how largely they are devoted to the dissemination, not only of the grossest indecencies, but of future misery to a multitude of readers. Such papers are put into the hands of boys and girls of all ages, and find their way to the table of all classes of society, corrupting the purity of the young, arousing the fears of the weak, and encouraging vice by offers of immunity and relief. So outrageous has this system become, that no longer satisfied with the publicity of the largest type in our daily press, the venders of quack medicines and secret remedies paint their obscene notices in the most exposed places by every roadside. It is indeed time that our legislature should turn its attention to this subject.

No one outside our profession, and we only to a small extent, can estimate the amount of bodily harm and loss of money inflicted upon the unwary and ignorant, who, induced by such advertisements, place themselves once within the power of these quacks. A large sum of money is at once demanded before the promised cure is undertaken, and the fears of the victim are so worked upon, during a treatment purposely designed to aggravate the disease, that he is obliged to pay additional sums until his means are exhausted. We were recently informed by a gentleman, whose official position led to the discovery, that two of the best houses in a certain fashionable street in this city were owned and occupied, under false names, by two of the most notorious of these advertising scoundrels.

There is another class of advertisements, less indecent, but quite as objectionable on the grounds of inhumanity and injustice to the people, of whom they profess to be the guardians, that fill the columns of our journals almost without exception. These are the notices of the innumerable remedies, patent medicines and itinerants, which display their deceitful promises to the credulous eyes of the sick throughout the land. Our Sunday and religious papers are particularly devoted to the interests of these systems of robbery, and seem even less able to resist the temptation of a large fee than their more worldly daily brethren. The proprietors of such journals cannot screen themselves from the consequences of the course they pursue on the plea of an honest belief in the statements they publish, for no one is better informed than they of the short success of each new remedy or quack they introduce to the public, nor would they dare rely upon them for personal relief in sickness. The amount of evil they thus foster, and for which they are directly responsible, may be in part estimated by the magnitude of the sums received for advertising, which amount to millions in a single year. This, of course, represents only the pecuniary loss, which falls chiefly upon the poor and middle classes of society; the amount of physical suffering and disease thus occasioned cannot be estimated.

We hope that some of our leading journals will take this matter up, and not only proclaim their own intention of excluding all advertisements of this class in future, but, as in England, insist upon a uniform standard in this respect, upon which the respectability of all others shall be judged. Such a reform in their own conduct will give them the moral weight of self-purity in their judgment of the affairs of others, and gain the commendation and respect of all their readers.

Hare-lip Pins. *Messrs. Editors*,—Having had occasion to operate twice within two years on cases of hare-lip where I thought it advisable to use pins, I got our jeweller to make me two gold pins of about half the size of the common hare-lip socket pin, and one and a half inches in length, and to turn a small eye for a head, to enable me to hold them conveniently. After passing them through the sides of the divided lip, I clipped off the head and point, with a pair of bone forceps, and found them to work so well that I would recommend them to any one who may have occasion to use pins in an operation of the kind. S. B. S., M.D.

Exeter, N. H., February 27th, 1865.

In justice to Messrs. Nichols & Co., as we find our language has conveyed an erroneous impression, we would state that their addition to Liebig's soup, spoken of in preceding numbers, consists of ten grains of proteine, from animal albumen, to each two ounces of the preparation. Although a harmless addition, we cannot consider it any improvement upon the original formula, and are happy to hear that they have also prepared the materials in accordance with the directions of Prof. Liebig.

A Horse-flesh Banquet.—The grand "hippophagic banquet" has just been celebrated with great *éclât* at the Grand Hotel, Paris, under the patronage of the French Humane and Acclimatization Society. M. Quatrefages occupied the chair, and there were 130 guests present, a good 30 of these being members of the medical profession. In the face of the continued increase of the price of butchers' meat at Paris, these efforts of philanthropists to bring another variety of animal food within the scope of the poor man's purse are highly laudable. Of course, at this celebrated hotel all the resources of the culinary art could be drawn upon, and if palatable food could not be there produced from the material in question, it would be a hopeless task to seek to procure a general acceptance of horse-flesh as an article of diet by those whose means of preparing it are so limited. A chief point to be ascertained was the kind of soup it is capable of producing, this being an indispensable, and, indeed, the main article in the dietary of the French lower classes. This was pronounced to be good; but M. Latour, who has, by perseverance, advanced himself to the position of a critical, and almost an epicurean, hippophagist, declares that he has tasted much better soup when this has been prepared for a smaller number of persons, and especially at snug little horse-flesh parties which he is in the habit of entertaining at his own house. The late M. Renault, indeed, at the celebrated Alfort dinner,

made his guests the vehicle of exact experimentizing, having soups prepared from horse and ox, in a manner precisely similar, placed before them in such a manner that they were not aware of what they had partaken until they had delivered their verdict. The horse won by a whole neck! At this banquet, where the cook had more scope, he evinced his power by producing boiled horse and cabbage and horse *à la mode*, which were pronounced perfect, and absolutely undistinguishable from beef similarly treated. But it seems that the more elaborate dishes, as the *hachis de cheval à la ménagère*, the *filet de cheval roti*, and the *paté de foie de cheval*, did not give the same amount of satisfaction as the simpler viands, possibly because the appetites of these hardy investigators had become by this time rather blunted. This is of little consequence, as these are not likely to be sought for by the poor, who, notwithstanding the eulogiums passed on the new food, will constitute the only hippophagists after the fashion has passed away. The banquet, upon the whole, was pronounced a splendid success, and the prefét of police has authorized the sale of horse-flesh, subject to the sanitary regulations which prevail in France with regard to the vending of flesh-food, and of which we stand so much in need in this conntry.—*London Med. Times and Gazette.*

A Chinese Beauty's Foot.—Curiosity impelled me once to be one of a party in examining an uncovered foot. The young woman was not at first very ready to remove the shoe and the collection of bands around the limb, to satisfy the strange request we made, but a few dollars quickly dissipated her reticence, and also induced another to increase the exhibition. It was no treat. The removal of the bandages was like the exhumation of a half-decomposed body, and made our party close their mouths and hold their nostrils, much to the augmented astonishment of the young ladies, while we stretched our necks to see all as quickly as possible.

No toe was visible but the big toe; the others had been doubled under the sole, with which, after weeks of suffering and excruciating pain, they had become incorporated, and were not to be distinguished from it, except by the number of white seams and scars that deeply furrowed the skin. The instep was sadly marked by the vestiges of large ulcers that had covered its surface, consequent on the violence used to bend it up into a lump; and, in form, as well as color, was like a dumpling; while the limb from the foot to the knee was withered and flaccid as that of one long paralyzed. The display was repugnant in every way—we fled, and have been careful ever since to be absent when any more of these living mummies were about to be unrolled.—*Travels in Mantchu Tartary.*

Foreign Medical Intelligence.—Dr. Jonas Quain, author of Quain's Anatomy, died on the 31st of January in London, at the age of 70.

There are 18,000 practitioners of medicine in France at the present time.

We are sorry to announce the recent death of the eminent English geologist, Dr. Hugh Falconer. He has been engaged for the last few years in investigating the bone-deposits in caves.

The amount of absinthe drunk in Paris may be estimated in part by

the fact that Switzerland alone sent 7,500,000 gallons thither last year.

The grand prize of 5,000 francs has been adjudged by the Académie des Sciences of Paris to M. Roussell for his History of Pelagra; and among others one of 2,500 francs to M. Zenker for his investigations on Trichiniasis. The grand prize in surgery for 1866, of 20,000 francs, has for its subject "The Preservation of the Limbs by the Preservation of the Periosteum."

Dr. Livingstone is planning a new journey across the African continent.

A Chinese Doctor.—There are quite a number of Chinese physicians in California, who practise among their own people. But we have come across one whose business is with the white-skinned races, and who has a large practice in his way. "Doctor" Li Fung (or some such name) has his office crowded daily with intelligent (?) Anglo-Saxons. We are informed by an educated Chinaman that Li Fung had no medical training at home, but came to California as a common laborer. Taking his cue from the advertising charlatans who infest our community, he proclaimed himself a physician of great skill and experience, and immediately drew a crowd of halt, lame and blind imbeciles, eager to have their wrists clutched by a semi-barbarian, and to test the virtues of grasshopper tea and dried maggots. We have actually conversed with one of his victims—patients, we mean—who assures us that Li Fung can tell, on feeling the pulse and without asking a question, everything that ails his patients. When the Chinese want medical aid, they go to a man whom they know to have been educated in his calling. John will not trust Li Fung, but laughs in his capacious sleeve to see the superior race jostling each other in pursuit of a Chinese mountebank.—*San Francisco Med. Press.*

We learn from the *Pacific Medical and Surgical Journal* of San Francisco, that a charter has been obtained for the Toland Medical College of that city, conferring upon it all the privileges and powers of a regular University of learning. A college edifice has been erected at the sole expense, as we understand, of Dr. Toland, which, now that the charter is obtained, has been conveyed by him to the trustees of the college. The first course of lectures commenced the present season.

The annual commencement exercises of the Cincinnati College of Medicine and Surgery were held on the 3d ult., when the degree of M.D was conferred on twenty-three candidates. The valedictory address was delivered by Prof. Daniel Vaughan.

The Report of the Cincinnati Branch of the U. S. Sanitary Commission for three years ending Dec. 1, 1864, shows that the money expended during that time, in the purchase of sanitary supplies, the support of hospitals, and other aid to sick and wounded soldiers, amounted to $223,675 28. The various donation supplies distributed during the same time were estimated at $856,000 00—making a total of $1,079 675 38. There remained in the treasury on the last day of December, 1864, $86,246 20, invested in U. S. securities.

During the last year the number of cases treated at the Massachusetts Eye and Ear Infirmary was, males 1786, females 1753. The expenses have been $4,544 12 for increased accommodations, and the total expenses $12,042, and the amount received from all sources $7,230 88. To meet the increased expenses of the Institution an appropriation of $5,000 is needed.

The Iowa State Dental Society met at Des Moines, the capital, on the 4th of January. Officers for the year were elected, essays were read, and the following resolution was unanimously adopted: — "*Resolved*, That the time has arrived when no person should enter the dental profession without having first *graduated* at a dental college; and we pledge the profession and each other that we will admit no one to a dental pupilage under us without a guarantee that he will avail himself of the high and necessary privileges of these noble institutions."

The United States Laboratory, located at Astoria, L. I., was recently destroyed by fire. The fire commenced about 9, A.M., in the ceiling over the drying room, and the flames spread so rapidly that little opportunity was given to check them. The dwelling apartments of Assistant Surgeon J. H. Bill, U.S.A., in charge, were also destroyed. The loss by the fire to the Government, it is stated, was about $50,000.

From the Fifteenth Annual Report of the Association for the Relief of Aged Indigent Females, Boston, we learn that the number of inmates Jan. 1, 1864, was 70; died during the year, 7; removed, 1. Entered during the year, 26. Number now in the house, 88.

The Mason General Hospital, Pemberton Square, Boston, has been abandoned, and the patients removed to the United States Hospitals in the vicinity.

In the Knight Military Hospital, New Haven, Ct., there are 563 patients, of whom 300 are sick, and 263 wounded. The hospital bakery now turns out about 2000 loaves of bread daily, which are used in the hospital and at the Conscript Camp.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, MARCH 25th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - - -	63	47	110
Ave. mortality of corresponding weeks for ten years, 1853—1863,	43.7	35.5	79.2
Average corrected to increased population - - - - -	00	00	86.64
Death of persons above 90 - - - - - - - - -	0	1	1

DIED,—At Duxbury, Mass., March 23d, Dr. John Porter, aged 72.—In Acton, Mass., 22d inst., very suddenly, Dr. John M. Miles.—At South Danvers, 14th inst., of paralysis, Dr. E. F. Kittredge.

DEATHS IN BOSTON for the week ending Saturday noon, March 25th, 110. Males, 63 — Females, 47. Abscess, 2—accident, 1—apoplexy, 2—inflammation of the bowels, 1—inflammation of the brain, 2—bronchitis, 4—burns. 3—cancer, 1—chickenpox, 1—cholera infantum, 1—cholera morbus, 1—consumption, 20—convulsions, 4—croup, 1—diarrhœa, 4—diphtheria, 1—dropsy, 2—dropsy of the brain, 3—drowned, 1—dysentery, 1—erysipelas, 2—scarlet fever, 1—spotted fever, 1—typhoid fever, 2—disease of the heart, 4—disease of the hip, 1—infantile disease, 4—inflammation of the lungs, 5—marasmus, 2—metritis, 1—old age, 5—paralysis, 3—peritonitis, 2—puerperal disease, 1—smallpox, 8—sore throat, 1—suicide, 1—tabes mesenterica, 1—unknown, 8—whooping cough, 1.

Under 5 years of age, 43—between 5 and 20 years, 7—between 20 and 40 years, 29—between 40 and 60 years, 18—above 60 years, 13. Born in the United States, 88—Ireland, 16—other places, 6.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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REVIEW OF DR. TULLY'S SYNOPSIS OR CLASSIFICATION.

[Communicated for the Boston Medical and Surgical Journal.]

A Plea for a True Classification for Materia Medica.

WHEN entering a new field of labor, important advantages will be gained by taking a general survey of it in the outset, ascertaining its boundaries, making out its natural divisions, and estimating the amount and kind of labor that will be required in each. We shall then know better where to begin, how to proceed, how to avoid useless and unprofitable labor—can take truer note of the progress we are making, and having more precise and definite objects in view, can labor with more rational hopes and a truer ambition. The advantages thus gained, especially if the field is of large extent and varied soil and surface, will far more than compensate for this seemingly extra labor. In the cultivation of science, very similar though still more important advantages will be gained from a synopsis, one object of which is to give us a general view of the whole subject. A synopsis or classification not only helps the memory, but essentially aids us in taking just views of any department, in attaching due importance to each individual fact or object of a science, besides enabling us to take a more just and comprehensive view of it as a whole. It has somewhat the effect of a magnifier, the necessity for which is in proportion to the distance or minuteness of the objects to be examined; whereas the necessity of a synopsis or classification is in proportion to the number and diversity of facts or objects which the science includes. When these are but few and small, there is but little need of classification; but in materia medica they are so numerous and their diversity is so great, we shall work and investigate at random, and make but slow, wearisome and uncertain progress without it.

To show the magnitude of the pharmacologist's undertaking, it has been said, "he must know the effects and influences which all the substances and agencies in nature are capable of producing upon

disease, before it can be said, in literal strictness, to be complete." *(Bartlett.)* Making due allowance for the illusion of such a view, or bating the extravagance of this assertion, the truth that will remain must be appalling, and make him feel the need of a synopsis or the simplifying effects of general views and comprehensive classification. But when he sees all the substances and agencies required, numerous as they may still be, reduced to twelve or twenty clearly defined classes, and those comprehended in each class arranged in as well defined groups, and that they are to be studied in groups and classes, he can take courage.

The immense accumulation of therapeutic agents, for which no individual nor class of individuals can be to blame, is nevertheless a just cause of complaint. Doubtless a large proportion of those now thought worth retaining are to be discarded eventually. They are to be discarded, or many of them at least, not because they are incapable of producing salutary and even curative effects, but because of their inferiority in this respect to analogous ones. But there is only one way to ascertain their inferiority, and that is by bringing together those that are analogous, that a comparison may be instituted; and the only way to prevent a constant increase of the evil, when a new remedy is brought forward, is to find out its true position and make the comparison. Classification, therefore, must inevitably precede the discarding process, and those most anxious to commence the latter should be most zealous in favor of the former.

Another effect of a true classification will be to harmonize the views of those who adopt it, or at least, to produce a common understanding among them, without which it will be impossible for them to labor in concert or become mutual helps, prompters or correcters. When those engaged in the same pursuit do not understand each other precisely, how can they be expected to view things in the same light, become harmonious in their opinions or criticize each other to any purpose; indeed, how can they know whether they see and think alike or not. Hence nomenclature is so intimately connected with classification as to be wholly inseparable from it: a true classification must have a correct nomenclature; it would be chimerical to think otherwise. Inappropriate names will be differently understood by different individuals, and thus not only lead to error and confusion, but wholly interfere with the unity or concert of effort and reciprocity of results so essential to the advancement of materia medica. For this, a true classification, with a correct nomenclature of course, is about as needful as a skilful commander in conducting a campaign; it furnishes voice, and becomes the medium of a common understanding throughout the ranks of its cultivators.

Again, an arrangement of facts, objects or phenomena, according to their individual peculiarities, and in such a manner as to show their true relationship, is often the very thing that leads to new and valuable discoveries. A knowledge of the relations subsisting between

the heavenly bodies has led to most of the important discoveries in astronomy; while incalculable benefits have resulted to chemistry, botany and other natural sciences from modern improvements in their respective classifications and nomenclatures—benefits that never could have been realized without these improvements. A new fact may be of but little consequence in itself considered; the clearer views it gives us of the relations subsisting between those previously known, and the facility it affords for further investigations, being the principal benefits resulting from its discovery. Hence, the farther we advance in a science, or a knowledge of these relationships, the greater are our facilities as well as our inducements for further advancement. The success of those scientific men to whom the world is so largely indebted has consisted, not so much in the discovery of new facts or materials, as in their having reduced to science and put a true estimate upon those already known; to their having shown their true relationships, which gave to each a new significance and importance, and thus indicated the true course of investigation and made it easy, or cleared the field and made it attractive.

This, when rightly considered, may be the most weighty consideration in favor of a true classification for materia medica. If the benefits resulting from it should prove equal to those that have been realized in other sciences, as there is every reason to think that they would, we cannot feel too much solicitude on the subject. The issues, in which physicians themselves as well as their employees have a stake, are, the continuance of disease or the restoration of health, death or the prolongation of life. To what higher purposes can the aid of science be invoked?

If it must be admitted that our knowledge of classification, or what strictly belongs to the science of materia medica, has had but little to do with our success in the use of medicines as yet, we are by no means to infer from this that the perfection of the science is not precisely what is needed to perfect ourselves in the art of physic. No rapid improvement in the use of medicines can be looked for till they are classified and arranged, and upon true principles; and, in order that the practice of medicine may be carried to the perfection of which it is susceptible, it would not be difficult to show that, notwithstanding the importance of anatomy, physiology, etiology, pathology or diagnosis, or any other kind of knowledge of which we can avail ourselves for the counteraction of disease, a true classification for materia medica is still the most important desideratum. Till we have such an one, we are either wandering about or waiting at the threshhold, and may justly be accused of arrogance and presumption for withholding our fellowship from certain other outsiders.

But it would be superfluous to argue a point so uniformly insisted on by men of science everywhere, and tacitly admitted by all, were it not that a proposition may be tacitly assented to by the multitude

before it has gained the assent of the understanding, and without any adequate conception of its importance. It would be sufficient to say that any improvement in the classification or nomenclature of a science is an improvement of the science itself.

It would be difficult to theorize medicines out of use. While mankind are subject to pain and peril from disease, they will instinctively resort to them for help, and a science of medicine will be one of their necessities.

It has been said that materia medica is not a science, and more than intimated that it never can be. But has it not facts in abundance that wise and learned men have been accumulating for ages; nay, has it not a sure and enduring foundation to a considerable extent already laid? The facts or materials may be in such disorder as to be but dimly perceived at present; not knowing their true places or relationships, we do not comprehend their use and importance. But this only shows the need of some master hand, which sooner or later is sure to come, to complete the foundation, after which all hands can be employed, and without the aid of any extraordinary genius, to rear the superstructure.

Useless, cumbersome, appalling even as this mass of materials may appear to some, the true scholar, who is necessarily brave and unshrinking, instead of turning from, or casting them overboard, will take the occasion to show that pharmacologists have still a vast work to accomplish, to which they can be neither too expeditious nor too earnest in addressing themselves. We have erred in under-estimating its magnitude and importance. Our knowledge of drugs may be greatly improved, if not perfected; and till we have corrected this error, complied with the requisitions, availed ourselves of the proper means and adopted a true course of investigation, it would be neither scholarly nor wise to talk of dispensing with them. It is too soon for Young America to turn back, or for a veteran in the profession to take credit to himself for "having inaugurated a nature-trusting theory."

Its Plan.

A synopsis will be valuable, of course, in proportion as it furnishes the advantages or answers the purposes that have been alluded to. It is not to be supposed, however, that all the advantages of a true classification can be perceived till such an one has been produced, probably not till we have long been partakers of its benefits, and perhaps not till materia medica shall have been redeemed from its present semi-chaotic state. The labors of scientific men have often proved more valuable than they themselves anticipated. When successful, "they have builded better than they knew."

It would be easy to make an arrangement for materia medica that would be quite systematic, but without its being in the least degree useful for the purposes mentioned. Indeed, all the arrangements heretofore proposed came far short of answering these desired ends.

As in the case of the magnifier, so with a synopsis or classification, whether we get the desired benefits from it or not depends upon its character or construction; its plan or the principles on which it is founded; its consistency and naturalness or the manner in which it has been executed. And the analogy holds good in another respect: any deviation from the plan or slight mistake in its execution will make confusion throughout, destroy its integrity and impair its usefulness to a far greater extent than might be supposed from the slightness of the mistake.

Dr. Tully looked at materia medica as one of the natural sciences. He found it in confusion, of course, as had been the case with botany and others no long time previous. The very best thing to be done for it was to reduce it to order or system; and to do this the first step was to find out its natural classification—the plan to be pursued and the principles to be observed in its execution. That this would be attended with extraordinary difficulties was evident from the want of success that had attended all previous efforts of the kind. The plan to be adopted, however, could hardly be mistaken. It was the same that had been pursued to some extent by most authors, viz., to make the operative effects of medicines—the medicinal powers—its foundation. That this is the only plan for a true classification for pharmacology is evident from its having been so generally adopted in part, but more especially from the fact that whatever other plan has been resorted to, a distinct recognition and even a practical use of this has been found unavoidable. The subject cannot be treated of without constant reference to emetics, cathartics, tonics, diaphoretics, &c., as so many different and distinct classes of medicines, founded upon as many different and distinct medicinal powers. And besides, the powers or operative effects of medicines constitute the basis, the facts on which pharmacology rests. These are its elements, with which the pharmacologist cannot make himself too familiar. They have the same relation to pharmacology that the nine digits have to the science of numbers, or the alphabet to written language. What pharmacology most needs is to have its alphabet fully made out and properly arranged. The difficulties may be great, but since our a, b, c's have been so long in use, with such slight alterations, either in their properties, powers or arrangement, and have answered so admirable a purpose, why should we despair? Most assuredly the difficulties of ancient philologists must have been equal to those of modern pharmacologists.

It is obvious that a botanical, chemical and zoölogical arrangement, such as would best illustrate the fundamental principles of these sciences, though all the articles could be included and thus be very systematically arranged, would answer none of the purposes of a pharmacological arrangement. The medicinal powers—emetic, cathartic, tonic, diaphoretic, &c.—would not be recognized. These

belong only to pharmacology. A synopsis, to answer the purposes or be entitled to the name, must be founded upon the principles of the science it is designed to illustrate. For pharmacology, therefore, a botanical, chemical and zoölogical would be no better than a simple alphabetical arragement. To adopt either would be like using flat and plain instead of convex glasses in constructing a telescope or microscope. Nor would any other plan than that of making the medicinal powers its foundation be materially better than either of these.

The arrangement of Copland, presented at the close of his admirable essay on Therapeutics, professed to be "according to their modus operandi and effects," and which is in some parts, to be sure, founded upon the operative effects of medicines—the medicinal powers, and in others upon their modus operandi, but in others upon the parts or organs acted on, in others still upon the symptoms or pathological conditions they tend to obviate, &c.—is about as unphilosophical, heterogeneous and incomprehensible as can be conceived. Whatever advantages it may have in other respects, in directing attention to certain minor considerations for instance, to illustrate the great principles of pharmacology or therapeutics, it is utterly worthless. It tends to confuse rather than to systematize our knowledge. But the incongruity or want of consistency and naturalness so strikingly manifest in this, are more or less apparent in all others heretofore proposed. Though in every one of them the true plan has been adopted and pursued to a certain extent, yet sooner or later there has been a departure from it sufficient to defeat the objects intended, and render it comparatively worthless. There is evidently no arrangement that can take the place or answer the purposes of that founded on the powers or operative effects of medicines, and on these alone. These are the physician's appliances, his tools, with the peculiarities of which he is to become familiar as his first duty. No knowledge of their secondary, incidental or occasional uses, or of their modus operandi in certain cases, or of the parts or organs most affected by them, and especially no pathological knowledge, however minute and accurate, can take the place of a right and dexterous use of these. These, therefore, must be the foundation of its synopsis, as they are the foundation of the science itself.

Difficulties in its Execution.

Dr. Tully differed from all his predecessors in his attempt to adhere to this plan strictly from beginning to end. But there were difficulties to be encountered, which had appeared insurmountable to others and turned them aside; and besides, the difficulties themselves had become complicated and made worse by the mistakes that had been committed in every attempt to get rid of them. Now the best way to obviate or solve difficulties, or to correct mistakes, is to fully comprehend them in the outset; and in order that we may judge of the

success of his undertaking, we must take the same view of these difficulties that he did and attend to his manner of solving them. There is simplicity in nature always somewhere, though it often requires profound thought and study, and sometimes genius of a higher order even than Dr. Tully's, to find it.

The undertaking was analogous to that of Cuvier or Linnæus. It was a purely intellectual or scientific, in distinction from a practical problem, for the solution of which physicians, those especially who are capable of distinguishing themselves as medical writers or practitioners, and who are necessarily practical men, are disqualified by their vocation. It should be no disparagement to them nor to the profession, if for such an object they were obliged to call in the aid of those who have long been devoted to science exclusively. The distinction between the practical and the scientific man, as recognized by one whose name will be familiar to men of science, if not to physicians everywhere, is worth quoting here. He says: "The community should foster the purely intellectual efforts of scientific men as carefully as they do their elementary schools and practical institutions, generally considered so much more useful and important. For from what other source shall we derive the higher results that are gradually woven into the practical resources of our life, except the researches of those very men who study nature, not for its uses but for its truth? It is this that gives it its noblest interest. It must be for the truth's sake, and not for the sake of its usefulness to humanity, that the scientific man studies nature. The application of science to the useful arts requires other abilities, other qualities, other tools than his; and therefore I say that the man of science who follows his studies into their practical application is false to his calling. The practical man stands ever ready to take up the work, when the scientific man leaves it, and adapt it to the material wants and uses of daily life."—(*Method of Studying Natural History. Atlantic Monthly*, Jan., 1862, p. 8.)

Whatever may be said of Dr. Tully as a practical man, no one will deny that he was a man of science. He was more favorably known among scientific than medical men. By the latter he was often called a theorist, yet no medical writings are freer from theories or speculations than his. His fault may have been the one alluded to in the foregoing quotation—that of following his studies into their practical application. But if so, this only renders what he has to say on this subject all the more worthy of consideration.

But the operative effects of medicines were manifold, and it was difficult to decide in all cases which were to be taken as fundamental. It was clear that this could not be arbitrary in a single instance. It would be a great mistake to suppose that it matters little as to what or how many classes are contained in the synopsis. If natural, we can have no choice in either case. There were twelve, however, that had already been decided upon, and in regard to which there was

scarcely room for mistake or disagreement. We shall designate them here by such names as will be familiar or most generally understood, though as in regard to some of them it is hardly possible that they will be understood alike by all without their definitions; these will be given after presenting the catalogue of classes, in which five of them will be changed, mainly for the sake of precision, though partly for the sake of uniformity; for it is desirable that in this, as has been thought best in every other science, there should be uniformity in the names of the classes.

These twelve powers were:—1, antiphlogistic; 2, stimulant; 3, tonic; 4, emetic; 5, cathartic; 6, diaphoretic; 7, diuretic; 8, narcotic; 9, nervine; 10, astringent; 11, antacid; 12, demulcent. Each of these twelve powers had been regarded as fundamental, or had been made the foundation of a class time immemorial, and the name of the class had been made to correspond with the power. Furthermore, it was evident that these powers had been selected as fundamental, not from choice but from necessity. Up to this point all was natural and satisfactory; there was no room for doubt or perplexity. Doubts and perplexities were to come afterwards; but thus far the classification was established, and in such a manner that we could not but accept it.

Though a large proportion, yet by no means the whole, of the articles could be included in these classes. There were many valuable ones that could not naturally, and some that could not by any possibility, be referred to either of them. It is too obvious to remark that in a true classification for materia medica, every article and every process that can be usefully employed in the treatment of disease can find a place, and must necessarily be included in some one of the classes. These twelve classes, therefore, so well established that we could neither reject nor change them if we would, did not answer the requirement. By common consent, others were needed. These, of course, were to be founded as the others had been, each upon a power different and distinct from all others. It was obvious, also, that the selection in these cases could not be arbitrary any more than it had been in the others. This was the point at which others had erred; or it was in the selection of foundations for the remaining classes that the greatest difficulty had been experienced and the most important mistakes had been committed.

Before we proceed to the solution of this difficulty, however, there are two others which, though of minor importance, will be better understood in connection with what has just been said, and may therefore be considered as first in order. It matters little which of these difficulties comes uppermost, or if there has been any systematic arrangement of them it has not been shown, even by Dr. Tully, and if we fail of presenting them fairly it must doubtless be attributed to this.

[To be continued.]

CASE OF OVARIOTOMY.

[Read before the Boston Society for Medical Improvement, and communicated for the Boston Medical and Surgical Journal.]

By David W. Cheever, M.D.

Mrs. W., aged 40, born in Ireland; mother of four children, the youngest ten years of age; always a healthy woman. One year ago, noticed a tumor in the right iliac region, movable on changing posture. It increased rapidly. She went to the Massachusetts General Hospital in May, 1864, and remained there three weeks. Soon afterwards, she was tapped for the first time, and since then has been tapped nine times. Always several pails of dark, ropy, viscous fluid were brought away. Catamenia regular until May—none since. Of late, she has to be tapped every three weeks, and suffers chiefly from distension. Now--March, 1865—is confined to bed most of the time; has a good appetite and digestion, and a reasonable amount of strength. Is a woman of great decision and firmness, and voluntarily desires an operation, being conscious that the tappings are rapidly approximating, and that she cannot last long as she is. No efforts were used to persuade her to an operation; but she herself determined to take the chances, and was admitted to the City Hospital, under my care.

After tapping, the tumor which remains appears to be about as large as a child's head, to spring from the right side, and to float freely, with the exception of one adhesion to the right side of the abdomen. When distended, the latter offers the dull central percussion, and the resonance laterally, indicative of an ovarian cyst.

Operation.—March 8th, 11, A.M. Bowels emptied by enema. Urine drawn by catheter. Etherized. An incision was made through the integuments, along the linea alba, and to the left of the umbilicus, from midway between the ensiform cartilage and umbilicus, down to the pubes. On dividing the linea alba, a thin sac was exposed, which being accidentally ruptured, a thick, brown, ovarian fluid exuded. It being naturally supposed that this was the cyst, attempts were made to separate it from the abdominal parietes on the sides of the incision. It being adherent, it was again accidentally ruptured, when it was thought best to lay it freely open, the length of the external incision. It was now found to be the cavity of the peritoneum. In it lay the true ovarian cyst, about as large as a human head, communicating with the peritoneal cavity by a triangular, clean-cut foramen, through which a thick, brown fluid exuded, several quarts of which lay in the common cavity of the peritoneum. This being pressed out, the cyst was found to be adherent by only one firm band, as large round as the finger, and three inches long, to the right side of the abdominal walls. Below, the pedicle was attached to the right Fallopian tube and broad ligament, and was about two and a half inches across, when spread out. The adhesion referred to was divided with the knife, and silver wire ligature was

applied to one considerable vessel and left in. Next, the pedicle was included in a long clamp, and then transfixed with a needle, and heavy, double, silk ligature, and tied on each side. The ends of the ligature were made fast to the clamp, and the pedicle divided near the tumor. The clamp was placed crosswise at the lower part of the incision, with the pedicle and ligature outside the abdomen; the peritoneal cavity was gently syringed out with warm water, and the wound closed with interrupted silk sutures.

The patient being in a considerable collapse, one drachm of laudanum, with brandy, was given by the mouth, and ammonia by the rectum; the feet elevated, and heat applied. Reaction began in a few minutes, and at the end of two hours she was removed to bed, and the brandy and laudanum repeated at intervals. 6, P.M.—Surface warm; pulse 100, and quite as strong as before the operation; no pain, no discomfort. Beef-juice and stimulants. 11, P.M.—Perfectly easy; pulse 120; skin hot, but moist. Continue food, stimulants and warmth through night, and one grain of opium in pill, *pro re natâ.*

March 9th.—At 1, A.M., began to vomit, and complain of pain; at 6, A.M., much prostrated; at 9, A.M., aspect livid, extremities cool, pulse feeble, no pain, no tympanites, no appearance of hæmorrhage, perfectly conscious, respiration labored. At 4, P.M., she died, twenty-eight hours after the operation.

Note.—It being impossible that the small, true ovarian cyst could have contained the enormous quantities of fluid removed at various times by tapping; that fluid being ovarian in character, and an opening existing between the cyst and the peritoneal cavity, the inferences may be drawn:—

1st. That at one of the earlier tappings the true cyst was punctured, and had ever since poured its contents into the peritoneal cavity, and in consequence of this the true cyst, originally larger, may have shrunk in size.

2d. That all the subsequent tappings had been from the peritoneal cavity only.

3d. The mistake made in taking the peritoneum for the true sac, considering the dark, ropy, ovarian effusion there, was not unnatural.

The cyst contained several smaller ones; also various cystic, granular growths, like vegetations, and several pints of a fluid identical with that in the peritoneal cavity.

It has seemed to me proper to report this case, on account of the error consequent on the effusion of the contents of the cyst into the cavity of the abdomen, an accidental peculiarity, the result of non-adhesion after tapping; the knowledge of which may guard against a like mistake being committed in some future operation.

MR. SOLLY'S CLINICAL LECTURES ON SCRIVENERS' PALSY.

[Continued from page 159.]

THE next case I have to relate is also that of a bank clerk, who has now lost his means of subsistence. It is a sad case, and one in which all remedial agents appear to have failed to effect a cure. At first he improved very decidedly, but he did not persevere with the remedies.

Mr. S——, aged 25, clerk in the —— Bank, applied to me for advice on the 20th of October, 1863. He states that he has lost the use of the forefinger and the finger next to it, or middle finger; that he first felt a weakness in them about ten days ago, but that he did not like to give up, and therefore worked through it; but it increased so much that at last he could not hold the pen. He did not apply for advice at first, because he thought it was merely a sprain from pulling the ledgers about. I immediately recognized the first stage of scriveners' palsy. His complexion is pale, and he is rather thin, with reddish hair; circulation languid. He states that his family generally are healthy; that he has had no strain on his constitution in any way; that he has been married two years, living quietly and steadily. He has no loss of power above the elbow. There is a certain amount of numbness in the fingers affected, which is increased when holding a pen, or by any pressure upon the fingers. The numbness is not quite constant, but varies from time to time. Sometimes those fingers are fixed, and he has a difficulty in extending them. His hand soon gets very cold; but by wrapping it up he can keep the temperature at its natural standard. Ordered the sixteenth of a grain of strychnine twice a day, with galvanism.

Dec. 4th.—Has continued to take this dose without feeling any inconvenience whatever. He applies the galvanism about 7, P.M., by a battery of two plates of copper and four of zinc. He applies one plate to the front of the forearm, and the other he holds in his hand. Immediately after the application the hand feels quite well, and the improvement lasts some hours. The hand is always better in the morning after a night's rest. It is worse in the middle of the day. He says his hand is much better, and that he believes he could now write again, but he has not tried.

[Mr. Solly showed to the class some specimens of writing.] The above are written with the left and right hand. The latter shows better than any description the immense improvement that has taken place; but I have forbidden his using it again at present.

The next case, unlike the last two, has been one of complete recovery. It is that of a gentleman who, when first attacked, was a resident in eastern climes, and it was not until his return to England that he came under my notice. He was then very anxious about it, and being an intelligent man, but without any medical edu-

cation, naturally enough thought that, as a form of paralysis, it must be indicative of some kind of softening of the brain. When I told him, at my first interview, what was really the nature of his complaint, I took a great load off his mind, and gave him a tonic quite as effectual as the various minerals he had been previously depositing in his stomach. I did, indeed, then effectually "minister to a mind diseased." On asking him to give me a sketch of the rise and progress of his malady, he gave me the following:—

"The first time I ever felt any inconvenient sensation in my right hand was, as well as I can remember, about 1858–59. At that time I had an unusual quantity of writing on my hands—a great deal that was strictly official, and much that was semi-official. The inconvenience I then felt was a cramp throughout the entire hand, which made me often lay down my pen and *straighten out* my right hand with my left. In 1860 a good deal of my writing ceased. I still had much official writing, but semi-officially and privately I had much less to do; and the cramped state of my hand entirely disappeared.

"In 1862–3 my duties required more writing than usual. I imposed upon myself, also, a great deal of writing which did not, strictly speaking, belong to my office, and my hand again began to suffer. Meantime I felt the old sensation of cramp, but towards the end of 1862 it assumed a new form. I then began to feel a pain in my right thumb, exactly as I should have felt had I sprained it. I supposed I had sprained it by excessive writing; and, by the advice of my medical attendant, I bound a piece of white tape tightly round it, and this seemed to give me partial relief. By degrees the pain in the thumb ceased, and was succeeded by a sensation, difficult to describe, in the last two fingers of the right hand. It sometimes was a tingling—a burning sort of tingling—commencing in the tips of the fingers, or most properly most perceptible in the tips of the fingers, and extending up the hand; sometimes it was a numbness in the fingers, occasionally accompanied by sharp but slight shooting pains, which sometimes extended up the arm. I first felt this, as well as I can recollect, about the end of 1862. It gradually increased, never assuming an acute form, but practically rendering my hand much less useful to me than formerly. After writing for a while, I was compelled to pause, from sheer inability to continue writing. This effect increased rapidly, and in March, 1863, I was compelled to do much of my work by dictation. When my hand was in this state I suffered much from depression, probably occasioned by the, to me, inexplicable nature of my ailment. When my hand was at its worst, I felt a dull aching in the fingers affected, and up my arm. I should add that I had long been suffering from severe dyspepsia, occasioned by a long residence in the tropics.

"I used to feel the tingling sensation in the two last fingers of my right hand when I went to bed, and it would continue all night, be-

ing just as perceptible in the morning. But this I have not felt for two months. Still, when I am tired and out of sorts, I feel this sensation at once. I have twice felt it from these causes, without having used my hand for writing, since my last visit to Mr. Solly.

"To-day my hand failed after writing one sheet of note-paper. The effect of the strychnine was an almost instantaneous sensation of slight painful tingling in the same two fingers.

"Dec. 10th, 1864.—The sensation is difficult to describe; sometimes it is a tingling, sometimes a numbness. After writing three pages with the left hand to-day, I felt the sensation spoken of in the right leg."

When this gentleman first consulted me, I advised his using the right hand as little as possible, and gave him general tonics, &c. In August, 1863, I obliged him to discontinue writing altogether with the right hand, and to keep it in a sling; and he soon learnt to write in a very tolerable way with the left hand, but he did not make much progress in recovery. He continued to suffer from all the consequences of a long residence in the East, with severe mental occupation. His strength seemed gone; his appetite failed him; he suffered much from low fever and insomnolence. And though he did not use the right hand, it still felt uncomfortable and miserable. In the August of this year, by my desire, he left England for a more invigorating climate, and remained for two months in a bracing mountain air. The change acted like a charm. He began to walk out and sleep as in the days of his youth; he carried his gun all day, felt no fatigue, and shot with his usual dexterity. During this time, he scarcely ever touched a pen, either with the left or right hand.

After his return to England he felt even still more his sojourn in the hills. He says now:—"Though my hand still occasionally fails me, I can feel that I am all but cured; and if I am tired and out of sorts, my old symptoms return."—*London Lancet.*

ON THE SIMULATION OF AMAUROSIS.

By Dr. R. Liebreich.

It is exceedingly rare for individuals with normal sight to pretend that both eyes are blind. Such an occurrence has, however, been noted, as a psychical aberration, in females about the age of puberty. The normal action of the pupils, and the absence of ophthalmoscopic symptoms, are the principal foundations of the diagnosis.

It more often happens that patients who suffer already from advanced amblyopia, assert that they cannot see light with either eye; unable to follow an occupation, they endeavor by this means to gain assistance, &c. It is only after great experience that the surgeon can determine whether certain changes in the choroid, retina, or optic nerve, found by the ophthalmoscope, are sufficient to account for

loss of quantitative vision. Suspicion must arise when a patient asserts that he cannot perceive light, though the pupils act readily, enlarging or contracting according to the different degrees of illumination. No full decision can be come to when a patient asserts that he perceives light but not objects.

Simulated amaurosis of a single, and especially of the right eye, is very common, with the view of escaping the conscription. The individuals are usually well prepared to play their part, and have not unfrequently dilated the pupil by belladonna. Such a state of the iris will often assist the surgeon in detecting imposition, for the pupil is then far larger than in amaurosis. Belladonna not only paralyzes the filaments of the third nerve passing to the sphincter, but stimulates the sympathetic fibres distributed to the dilatator pupillæ. In natural mydriasis, the sphincter alone is paralyzed; in amaurosis the muscles of the iris possess their ordinary power; there is no reflex contraction from irritation of the retina; but in every other respect the iris acts in a normal manner. This is the most characteristic sign of monocular amaurosis. It must be remembered that the pupil contracts:—

1. Owing to the action of light on the same eye.
2. " " " other eye.
3. During accommodation for near objects.
4. " contraction of the internal rectus.

Much information may be gained by testing the size of the pupil under these different conditions. In practice the other eye should be closed; the eye to be examined should be held in one position, and alternately shaded and exposed to the light. If, then, the pupil is motionless, whilst it changes in size when the other eye is alternately shaded and exposed, and contracts when the other eye fixes a near object, there can be no doubt that one eye is completely amaurotic. If the iris is motionless under all the conditions mentioned, there is either natural or artificial paralysis. If it moves according to the amount of light, when the other eye is closed, the eye is not perfectly blind, although there may be possibly entire loss of qualitative perception. To decide the latter question, the patient should be induced to believe that the examination of the one eye is finished, and that of the other is commencing; a prism, with its base upwards or downwards, is then placed before the sound eye, both eyes being open. The image is single if the first eye is really amaurotic; but if the blindness is simulated, the patient sees two objects. By testing in this way the power of vision, the surgeon may determine whether the other eye is weak-sighted, and to what degree.—*London Ophthalmic Review*, from *Nouveau Dictionnaire de Médecine et de Chirurgie Pratiques*, i. 787.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, APRIL 6, 1865.

VENTILATION OF THE STATE HOUSE.—Any one who has had occasion to visit the Representatives' Hall in our State House, during the winter sessions, could not fail to be struck, on entering, by an overwhelming consciousness of the stifling heat, and oppressive emanations from the compact mass of human victims there collected to pass months in a stagnant atmosphere, which seemed to combine everything calculated to frustrate the benignant designs of Providence in the function of respiration. We cannot recal any assemblage of human beings, except, perhaps, the unfortunate inmates of the hold of a hospital ship, who are continuously subjected to such a noxious atmosphere. One who has felt the hebetude which steals over him after a prolonged inhalation of its impurities, can hardly wonder at the *carbonic acid* legislation which sometimes emanates from the unfortunate gentlemen enveloped in it, and which is only disarmed of its pernicious tendency by the invigorating *oxygen* of the Executive Chamber. Truly it has been too much to expect of human brains to be clear, deliberate and sagacious, when day after day exposed to the muddling power of such a devitalized air as our representatives have been compelled to breathe. The difficulty has long been felt and fully realized, but as yet no effectual means have been found to obviate it. The legislature of 1864 took a step in the right direction, however, when they appointed a committee to sit during the recess to improve the ventilation of the Representatives' Hall. The small sum (fifteen hundred dollars) placed in their hands for this purpose, only shows what an entirely inadequate knowledge the members of the House had of the extensive mechanical arrangements necessary to effect such an important improvement. The committee, therefore, could do but little towards this end, but what they did accomplish was so arranged as to form a part of a complete system if it should be adopted hereafter. They set forth, in their Report, in the most forcible language, the great need which has long existed for the contemplated change. So great has been the mortality in years past among the members of the legislature, coming, as many of them do, from the pure air of the country, that the danger to life has actually deterred gentlemen from accepting a place in the legislative halls. The committee refer to such an instance, and go on to present the evil in such a startling manner that we cannot do better than to borrow their language:—

"During the present season," they say, "a gentleman of eminent ability, whose services would have been of great value to the Commonwealth, declined a nomination for senator on that account. Members who have served in the House, and thus acquired practical experience, are unanimous in regard to the enervating and injurious effect produced upon them by a stay therein of only an hour or two. A former President of the Senate remarked to one of the Committee that the oppressive atmosphere of the House was always certain to give him a headache from remaining there only during the time occupied by a convention of the two branches.

"The sanitary history of the legislature of 1864 is a startling commentary upon the danger of allowing such a state of things to continue. To say nothing of the large numbers sick during the session, and those who are known to be suffering from impaired health, consequent upon inhaling the vitiated atmosphere of the House, the number of deaths actually brought to the notice of the House was very surprising. Within three months no less than five members deceased. What would be thought of the same rate of mortality, apart from the casualties of conflict, in a regiment of soldiers? Could men be readily found to enter upon employment so extra hazardous? The House consists of two hundred and forty members; a regiment of soldiers numbers one thousand. At the ratio of legislative deaths a regiment would lose two hundred and fifty men, or one quarter of its whole number, within the three years' term of enlistment. A colonel who should establish, and continue his camp in a situation as unwholesome and dangerous as the Representatives' Hall, would be unworthy of his position and deserve the execration of the civilized world. And yet the servants of the State have for years suffered as gross an indignity. It is not believed that, when the case is properly understood, such a state of affairs will be allowed to continue."

Truly we hope it will not; and the excellent Report before us will do much to bring about the much-needed reform.

The Committee found, on looking into the subject referred to them, that there were various other matters connected with the internal arrangements of the State House which called for improvement, and felt that it was not going out of their province to call attention to these also. These were the very limited and inconvenient accommodations afforded to most of the departments of State and for committee-rooms—the lack of ventilation in all the rooms, and the imperfect and costly system of warming the building, and the danger from fire. All of these are clearly explained in detail, showing very great need of change. In order to present the whole subject in a scientific and practical shape, the Committee applied to Messrs. Shedd and Edson, Civil Engineers, for suggestions, and the document before us mainly consists of their report in response to this call.

This report is a concise, compendious synopsis of what has been done and written on Ventilation. The authors modestly call their remarks on this subject merely suggestions, and do not claim to offer them as a complete treatise upon this intricate subject. Nevertheless, they have taken a cursory view of the whole ground, and have presented it in such an intelligible and interesting form, that we cannot help regarding this unpretending pamphlet as one of the most useful that has ever emanated from the public press of Massachusetts. Want of space compels us merely to glance at the principal topics discussed.

From an introductory chapter on the general subject, the authors go on to the Composition of the Atmosphere, which is treated in considerable detail. Next comes a chapter on the sanitary properties of the Constituents of the Atmosphere, in which the theory of respiration is explained and discussed, and the contaminating influences of noxious gases, too much or too little moisture, and impure emanations of all kinds are fully set forth, illustrated by very interesting facts from natural history, and the pathological history of man. And in like manner we have Temperature, Air Movement, Production and Distribution of Heat, Heating Apparatus and Ventilating Apparatus, discussed and illustrated in a very philosophical and entertaining manner. Thus is laid before the House of Representatives, probably before many of the members for the first time, something like a full and scientific view of the very important subject under consideration.

And we look for an extension of its good influence beyond the walls of the State House also. Indeed, we think it would be an act of wisdom in the Legislature to have this little pamphlet printed at the public expense and scattered broadcast over the State; for what with air-tight stoves, gas stoves, over-heated and closely-shut-up railroad cars, &c., it would seem that this subject of ventilation is just the one about which the community knows little or nothing.

With reference to the special object of their study and inquiry, Messrs. Shedd and Edson present the following conclusions:—

"1. That the supply to the occupants of the State House of fresh air, suitably tempered in heat and moisture, in such abundance as will obviate the necessity of their ever breathing the same air twice, is an object paramount to any considerations of trouble or expense.

"2. That the most efficient, reliable, economical and comfortable mode of heating the building is by steam at a pressure of twenty pounds or more; the heat to be distributed by steam pipes to every part of the building, and to be communicated to the rooms, in part by air warmed by contact with the pipes, and forced in, and in part directly by radiating pipes in the rooms.

"3. That, for the purpose of forcing in and controlling a constant and sufficient supply of fresh air at every point, we would recommend the use of a large fan-blower, of slow motion, driven by steam power. As at present arranged, the degree of ventilation which can be obtained in the Representatives' Hall, depends upon the difference in the temperature of the air in the ventilating flues and that of the air out of doors. There is a limit to the amount of heat which can be applied to the air in the flues, and consequently the change of air in the hall is less in proportion to the increased warmth of the outer air. It is probable that on a very cold day the quantity of fresh air supplied to the hall might amount to four cubic feet per minute for each of three hundred persons; but if the outer air should approach in temperature nearly to that of the air in the ventilating flue, there would be no change, and ventilation would cease. We have seen that it is deemed necessary to supply twenty cubic feet of air per minute for each individual, to insure health and comfort, and provision should be made to secure this amount to six hundred persons in the Representatives' Hall, and to a large number occupying other parts of the building. We consider the application of mechanical power, therefore, to be indispensable, both on account of its necessity for forcing in this large amount of air, and because we cannot be sure that under unfavorable circumstances the ventilation would not otherwise entirely cease.

"4. That, for the exhaustion of the foul air at every point, we would recommend a similar blower, driven by the same power; or, if this prove impracticable, we would provide for the application of heat to the escaping air at all necessary points.

"5. That the best place for the introduction of air, at least in the principal halls, is in or near the ceiling; and the best place for the exhaustion of the foul air is through the floor.

"6. That the orifices for admitting and for exhausting the air should be ample, and as well distributed as practicable.

"7. That the provision for the admission of warm air should be accompanied, for each room, with provision for the supply and mixture, previous to entrance into the room, at the pleasure of the occupants, of as much cool air as will keep the temperature at the most satisfactory point, without diminishing the supply of fresh air."

The members of the Committee, Messrs. Moses Kimball, James M. Stone and Solomon K. Eaton deserve well of the community for the very satisfactory course they have taken in regard to this important matter, and the information which they have been instrumental in diffusing with regard to it. We sincerely hope that our legislators will hereafter, in consequence, have the privilege of breathing a pure atmosphere. Who can doubt that their heads will

be the clearer, and their combined action the wiser for its invigorating influence?

The New York Medical Journal.—We have received the first number of a new medical monthly to be published in New York, bearing the above title. It is an elegant pamphlet of eighty-eight pages, and in excellence of matter and beauty of type and paper it is most creditable to its editors. The list of collaborators which it publishes comprises over fifty names of prominent members of the medical profession in New York and elsewhere. We welcome this new periodical with sincere satisfaction. It has been a positive stigma upon the commercial capital of our country that it has not supported a single medical journal. If the future numbers of this new publication come up to the promise of the first, the editors may at least feel that they have deserved success.

Puerperal Pelvic Cellulitis.—Dr. McClintock, in his admirable Clinical Memoirs on Diseases of Women, says of puerperal pelvic cellulitis:—

"Though sometimes very exhausting to the patient's strength, and always tedious in its progress, still the disease rarely ends fatally. Of *seventy* cases of puerperal pelvic cellulitis, coming under my care, I only know of two which so terminated; and in each of these the immediate cause of death was dysentery, apparently brought about by the bursting of the abscess into the colon. There may have been one other fatal case, but I cannot positively say, as the woman went from under my observation. The complaint is a more common sequence of first than of subsequent labors. Of *sixty-one* cases in which I noted this circumstance, twenty-eight, or nearly one half, were primiparous women; though of all the patients delivered in the lying-in hospital, the primiparæ formed only one third." "I agree with Dr. West, that cellulitis very rarely results from genuine puerperal fever; but still my experience will not permit me to doubt that it often succeeds to attacks of metritis, or metro-peritonitis; and Dr. Bennett is of the same opinion." "For example, of *sixty-two* cases, carefully investigated with reference to this particular point, in *thirty-four* there had been well-marked symptoms of uterine or abdominal inflammation, more or less severe, within the first week of childbed."

Mercurials in Pelvic Cellulitis and Iritis.—Prof. Simpson, in his Clinical Lectures on the Diseases of Women, says:—

"I must leave the question to yourselves to settle how far you will mercurialize your patients. It is ordinarily laid down, more particularly by English authorities, in regard to the treatment of iritis and of almost every form of acute inflammation, that the administration of mercury should be had recourse to as one of the most essential elements in it; and in the treatment of pelvic cellulitis I used formerly to have recourse to it in almost every case as a general rule of practice; and I often have recourse to it still in combination with opium, as in two-grain doses every two hours of the calomel and opium pill of the Pharmacopœia. But I begin more and more to lose faith in its

efficacy, for the disease goes on sometimes unchecked even when the mouth is salivated; and I really do not know that we have any certain proof of its power of producing absorption of inflammatory effusions. Ophthalmologists tell us that they can see these effusions beginning to be absorbed in the eye just as the drug begins to exert its constitutional action; but it is assuredly doubtful whether these phenomena stand in the relation of effect and cause, or whether they are not merely coincidences. I have heard Professor John Thomson repeatedly and strongly state that he had occasion to treat forty cases of syphilitic iritis, and having no faith in the reputed power of mercury in the cure of that disease, he treated them without mercury, and succeeded in effecting a cure in all the cases, excepting two, which occurred in the persons of two medical men who had had the misfortune, in the pursuit of their profession, to get their fingers inoculated with syphilitic poison, and who suffered from iritis along with other secondary affections. These two gentlemen had great faith in the power of mercury, and insisted on having it administered to themselves, and in them alone, out of all the forty cases of iritis, did the disease run an unfavorable course and end in loss of vision."

Fissure of the Rectum successfully treated by forcible Distension of the Sphincter Ani.—Dr. Otis said he wished to call the attention of the Society to the good results following the forcible distension of the sphincter ani, in a case of fissure of the rectum recently under his care—a lady who had suffered for a year and a half from acute pain following each attempt of defæcation, and lasting from eight to ten hours. On examination, he had discovered a fissure an inch in length, just within the anus. After putting the patient under the influence of chloroform, and inserting both thumbs into the rectum, he forcibly distended the anus. From that time to the present, over four weeks, the patient had been entirely free from pain, and considered herself cured.—*Proceedings of New York Medical and Surgical Society*, in *New York Medical Journal.*

Entozoa in Veal and Beef.—Professor Simonds and myself have just succeeded in rearing the larvæ of *tænia mediocanellata* in a calf, but at present the cysticerci are not perfectly developed. We know, however, that the larvæ are there, not only by the symptoms produced, but also from ocular demonstration; for having removed a very small portion of the right sterno-cleido-mastoid muscle (weighing 22 grains), three minute cysticercus vesicles were discovered in the portion detached. Even if the other muscles (to say nothing of the heart, lungs, and liver) are affected to the same extent only, we shall eventually find not less than 30,000 larval entozoa in this one animal—enough to give 30,000 persons the *Tænia mediocanellata*, should they be severally disposed to swallow a cysticercus.

By a *post hoc propter hoc* kind of reasoning, we might say that the little operation has done good, for the calf is certainly much better since the removal of three of its "guests." Each larva is about the size of a pin's head.—Dr. T. S. Cobbold in the *Lancet.*

Infantile Syphilis.—Prof. Sigmund, of Vienna, as the results of sixty-one cases, tells us that when the mother is syphilitic, the child is almost invariably syphilitic also. The intensity of the disease in the child is in proportion to its intensity in the mother, and to the recency of the poisoning of the mother. Infantile syphilis thus acquired is of great gravity. In Dr. Sigmund's sixty-one cases, there were seventeen premature births; and of these, eleven were born dead. Of the forty-four children born at full time, four were born dead. Of the forty-six born alive, four only survived three months. The mean length of their lives was twenty-six days; ninety days being the longest, and one hour the shortest period.—*Med. News and Library.*

The number of deaths in Providence, R. I., during the month of February, was 112—being 21 more than in February, 1864, and 32 more than the average for February in the last ten years. Scarlatina has been unusually prevalent in that city, 109 deaths having been caused by it during the last four months. This disease is also unusually prevalent and fatal in the towns of North Providence and Cranston.

Dr. Francis G. Smith has resigned his office of Physician to the Pennsylvania Hospital, and Dr. J. M. DaCosta, of the Philadelphia Hospital, has been appointed to fill the vacancy.

Commencement exercises took place at the Ohio Medical College on the 2d of March, and the degree of M.D. was conferred on forty-six gentlemen—the graduating class being one of the largest ever known in the institution.

A prize of $100 has been offered by Dr. T. C. Brinsmade, of Troy, N. Y., for the best essay on medical and vital statistics—to be awarded by the Committee of the New York State Medical Society on Prize Essays.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, April 1st, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week	48	40	88
Ave. mortality of corresponding weeks for ten years, 1853—1863,	42.5	37.9	80.4
Average corrected to increased population	00	00	88.44
Death of persons above 90	0	0	0

Pamphlets Received.—Annual Report of the City Physician, Boston, 1865.—Fifteenth Annual Report of the Association for the Relief of Aged Indigent Females, Boston.

Died,—At Onogra, Ill., March 28th, Dr. John W. Hinckley, aged 44, recently of East Boston.

Deaths in Boston for the week ending Saturday noon, April 1st, 88. Males, 48—Females, 40. Abscess, 1—accident, 3—anæmia, 1—congestion of the brain, 4—disease of the brain, 3—inflammation of the brain, 2—bronchitis, 3—consumption, 17—croup, 3—cynanche trachealis, 1—diabetes, 1—diarrhœa, 1—diphtheria, 1—dropsy, 2—dropsy of the brain, 2—bilious fever, 1—spotted fever, 1—typhoid fever, 1—gastro-malacia, 1—disease of the heart, 2—infantile disease, 5—insanity, 1—intemperance, 1—disease of the liver, 1—congestion of the lungs, 2—inflammation of the lungs, 6—marasmus, 2—measles, 1—old age, 1—paralysis, 2—phlebitis, 1—smallpox, 6—syphilis, 1—unknown, 6—whooping cough, 1.

Under 5 years of age, 36—between 5 and 20 years, 9—between 20 and 40 years, 21—between 40 and 60 years, 17—above 60 years, 5. Born in the United States, 63—Ireland, 20—other places, 5.

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CONGENITAL INTERVENTRICULAR OPENING OF THE HEART IN AN ADULT OF ROBUST HEALTH; OR RUPTURE OF THE SEPTUM TWO MONTHS BEFORE DEATH?

[Reported to the Boston Society for Medical Improvement, and communicated for the Boston Medical and Surgical Journal.]

BY J. B. S. JACKSON, M.D.

IN the number of the Boston Medical and Surgical Journal for Nov. 5, 1863, Dr. Thomas H. Gage, of Worcester, reported a case that was very remarkable in several points, and that he regarded as one of congenital interventricular opening of the heart. The specimen was one that he gave to me for the Museum of the Medical College, and that I exhibited to the Society, reading at the same time Dr. G.'s full history of the case that was afterwards published. It has occurred to me lately that it may have been a case of rupture of the septum; and, if such should seem to have been the fact, it would prove to be a more interesting case even than it was upon the first supposition.

The above new view of this case has been communicated to Dr. Gage; and although he still adheres to his first opinion, and gives his reasons for so doing in a note that I have received from him, and of which I shall hereafter give the substance, he has in the most liberal spirit, a spirit that has always characterized him as a lover of truth and a man of science, allowed me to make this communication to the Society and to publish it in the JOURNAL.

The patient was 19 years of age, and not merely healthy, but unusually robust. The fact, reported by Dr. G., of his jumping overboard from a man-of-war in the harbor of New York, a few months before his death, swimming one eighth of a mile to the shore, and then walking quite 200 miles to his home in Worcester County, and feeling in no way the worse for it all, is proof enough of his good general condition. In several cases of interventricular opening that I have investigated I have been surprised at the tolerance by the

system of this condition of the heart; but I have never seen a case in which the health was so perfect as in this one; and I cannot believe that the opening could have existed previously to the last two months, at which period I am now inclined to think that a rupture of the septum took place.

The supposed cause of this rupture would seem to have been very insufficient. He lifted a heavy stone; but how heavy a stone, and how much of an effort he made, does not appear. Such efforts are constantly being made with impunity, and yet the consequences in the present case were certainly very serious. Besides the interventricular opening, a small, thin aneurismal sac was found to arise from one of the pouches at the origin of the aorta, and this last is supposed by Dr. Gage to have formed when the stone was lifted, the interventricular opening having previously existed. A severe and sharp pain was at once felt in the lower part of the chest, and from that time there was dyspnœa, with marked physical signs. Dr. G. supposes that, owing to the congenital opening, the aorta was weak and unsustained at its origin, and, the pouch giving way under the effort the man made, the aneurism was formed. Cases of interventricular opening, however, have been sufficiently numerous here, I think, for us to have observed something of the kind before this, if there was any such tendency at the origin of the aorta; but I have never known of a case, here nor elsewhere.

The thick, firm and smooth edges of the opening in the septum, or at least of the muscular portion, are regarded by Dr. G. as evidence of its having been congenital; but I think that two months may have been sufficient for its cicatrization.

The rupture of the septum would seem to be a terrible accident, and so it certainly is when produced by external violence; but if, in an organ previously healthy, it occurs simply and without any complication, I can very well conceive, from what we know to happen when aneurisms now and then burst into the cavities of the heart, that the functions might go on, though laboriously. There was, however, a complication in this case; the aortal pouch yielded, and it would seem not improbable, when the very small membranous portion of the septum just below the valves ruptured, that one of the pouches of the aorta that are in such close anatomical relation to it, should be involved in the injury and give way. It does not seem to me that this complication would be likely to add much to the gravity of the case for the time.

After the accident, the functions of the heart were performed laboriously, but the man was in a vastly better condition than we should have thought possible. "He was up and about all the time," Dr. G. says, "drove into town (7 miles) repeatedly, and even when informed of the serious nature of his disease was very incredulous, simply because he suffered so slight inconvenience from it." This condition, Dr. G. thinks, would not be inconsistent with the accident

to the aortal pouch; and is the chief reason for his disbelief in the idea of the rupture of the septum at the same time. I have nothing, however, to add upon this point to what I have already said.

The hypertrophy of the heart was much greater, Dr. G. thinks, than could have taken place in so brief a period; but muscles are developed very rapidly under increased action.

A fact that has never been explained, so far as I am aware, in the case of interventricular opening of the heart, is the abnormal condition of the pulmonary valves; and, so far as I have observed, it is a constant fact. Dr. G., however, found them in his case, "nearly or quite normal; contrary to what is usually observed in these cases," and certainly though one of them was partially cut away, as seen in the specimen, now before the Society, all that remains of the valves is perfectly normal; and this fact, I think, would weigh strongly against the idea of a congenital opening.

There is, of course, no question that the immediate cause of death was owing to the rupture of the aneurismal sac into the right ventricle.

Rupture of a healthy heart, from a strain, is certainly something that I have never heard nor thought of. We have, however, transverse fracture of the patella from muscular action, occasional rupture of the tendons of the voluntary muscles, and I have recently read the history of an exceedingly interesting case of rupture of the tendinous portion of the diaphragm that occurred in one of our soldiers, and was due to great muscular exertion upon the field of battle—the man dying in a few days from strangulation of the intestine that had passed through into the left pleural cavity. If the septum of the heart, then, did give way, we should expect to find the rupture in the membranous rather than in the muscular portion.

In closing these remarks upon the above case, I wish to make my acknowledgments publicly to Dr. Gage, with whom I have been on the most friendly terms since he entered the profession, and to thank him for the liberality to which I have already referred, and which he has shown in allowing me to bring the case once more to the notice of the profession.

REVIEW OF DR. TULLY'S SYNOPSIS OR CLASSIFICATION.

[Continued from page 196.]

Difficulty arising from the possession of two or more Powers by a single Article.

In contemplating the articles to be arranged in these twelve classes already established upon true and natural bases, it will be perceived at once that in several instances two or more of these fundamental powers are possessed by a single article. Opium, for instance, is both stimulant and diaphoretic as well as narcotic; and the question

arises, how are such articles to be classed? At first this seems to complicate the plan, interfere with its simplicity and naturalness, and create doubts as to its feasibility. But it is a difficulty that will be unavoidable upon any plan, and no more insurmountable upon this than upon any other. After a little reflection it will appear less formidable than at first, and finally, instead of presenting any serious objection to the plan, it will be found one of the circumstances that renders it most eligible; or at least, that the complicated view of the articles presented by this discovery is one of the circumstances that renders their classification so indispensable. It is a difficulty that must be overcome, therefore, at all events.

It will be seen that upon this plan, it is an arrangement of the powers themselves rather than the articles; or an arrangement of the articles according to their powers; and, consequently, that the articles must follow where the powers lead. When asked whether opium is to be classed with the narcotics, stimulants or diaphoretics, the answer is, with all of them, and with as many others as it may be found to possess different and distinct fundamental powers. The rule, therefore, is, that each article must be included in as many classes, and be pharmacologically expressed by as many names as it possesses useful fundamental powers; the name of the power which is most prominent and useful taking the precedence. The narcotic power of opium being the first in importance, its stimulant the second and its diaphoretic the third, its pharmacological appellations would stand thus—narcotic, stimulant and diaphoretic; and so with all articles that possess a plurality of powers. This presents a short and easy way for each individual to make known his own views of the comparative importance of the different powers of any given article having more than one.

In this view the feasibility of the plan appears less doubtful, and if its simplicity and naturalness are less apparent at first, they will become more so from experience in its use, till finally it will be found the very best for all the objects contemplated that can be devised. Nevertheless, this circumstance—the possession of two or more powers by a single article—has doubtless been a stumbling-block to many, and, in connection with the other difficulties to be considered, has created a sort of universal scepticism as to the practicability of this or any other plan. Pereira, doubtless with precise and true views of what was necessary to reduce materia medica to a science, said that, "to ascertain the number of different and distinct powers in materia medica, and show their application to the treatment of diseases, was impossible in the present state of our knowledge." But the adaptation of this plan and the principles to guide us in its execution, will be better understood after considering the other difficulties and the mistakes to which they have given rise; after which the proposition rejected by Pereira may not appear so intensely impracticable as he supposed.

Mistakes in classing or referring Articles.

Numerous attempts had been made to complete the synopsis, yet no one had been satisfied with his success. The dissatisfaction, however, arose, apparently at least, not from any apprehension that there had been any mistake in selecting foundations for the remaining classes, but simply from the fact that notwithstanding from eight to ten more classes had been added, there were still several articles that were inevitably excluded or that could find no place in either of them.

Two expedients had been resorted to, to get rid of this difficulty: first, to crowd as many of these refractory articles as possible into one or another of the classes already decided upon, whether they had been rightly founded or not, and of course with but very little regard to any rules or principles by which the classing or referring of articles should be regulated. But besides the one already laid down, viz., that each article should have a place in as many classes as it exerts different and distinct fundamental powers, there is another to which but very little attention had been paid, but the importance and reasonableness of which must now be shown.

When an article possesses two or more powers, it is generally the case that these differ more or less, and sometimes very widely, in importance. Sometimes only one of two or three powers which an arcle possesses is of any material use; or, however useful the others may be as exerted by other articles, as exerted by this, either from their weakness or inadequacy, or from their interfering or being in some way incompatible with its most valuable power, the article is never prescribed for either of them. Now the rule to be observed in such cases is, that each article should be classed according to its useful rather than its useless powers; and when all are useful, that which is most so should take the precedence and be most prominently represented in the classification. To disregard this rule would be to defeat the ends and objects of classification, as may be shown by referring to one or two mistakes of this kind.

If, for instance, the curative effects of colchicum, an article that can hardly be dispensed with, are not at all dependent upon its cathartic power, and if this article is never used for its cathartic effect, it would be wrong to class it with the cathartics simply to get rid of it and because it happens to possess this useless and non-medicinal along with its valuable power. By referring to the synopsis, the student would not get the remotest idea of its use or of the peculiarities in its operation which he most needs to know. If never used as a cathartic, among the cathartics colchicum would be an intruder; and thus the article would be misrepresented on the one hand, while the integrity and usefulness of the classification would be damaged on the other.

And there would be the same objections to classing it with the diuretics, for unless it cures gout and rheumatism—the only diseases

in the treatment of which it has obtained a reputation—by virtue of its cathartic or diuretic operation, it would be wrong to class it with either, and without the slightest reference to the power upon which its efficacy depends. Now it is well known, or if not it should be, that the curative effects of colchicum, in these diseases, are the most strikingly displayed when it can be taken freely without producing either catharsis or diuresis, and that when it operates freely in either of these ways but very little dependence can be placed upon it for the cure of gout or rheumatism. It will occur to most readers that colchicum has been classed heretofore with the cathartics and diuretics, and nowhere else.

The most valuable power of mercury in its various combinations, and the one which the experienced physician always has in view, is not at all represented by the place assigned it in any classification heretofore proposed. In regard to this article, however, the power alluded to is so generally recognized, though but partially and imperfectly, as to be some guide to its therapeutic application; though the student would get no idea of it by referring to the synopsis, where he would find it classed with the cathartics, emetics and sialogogues. It is seldom prescribed for its cathartic, emetic or sialogogue effects exclusively; the operation which is most desired, and which is always had in view, has no necessary connection with, but is distinct from, either of them.

Errors of this kind can hardly fail to mislead, and, if common, would render the classification worse than useless. The facts, objects and phenomena and their relationships, which it is the very object of classification to represent and help us to keep in mind, would be wholly misrepresented, and thus lead to errors in practice, especially among young practitioners, who would be obliged to unlearn by experience what they had been taught by consulting the synopsis. But the worst effect would be to divert us from the true course of investigation, and render the discovery of a true classification more difficult and seemingly hopeless.

There are other articles in the same predicament; we have only referred to instances enough to show the importance of the rule that articles should be classed according to their valuable rather than their useless, or comparatively useless powers. Errors in classing or referring articles have been so numerous as to have greatly complicated the other difficulties—one arising from the possession of two or more powers by a single article; the other that of selecting true foundations for the remaining classes, and which is yet to be considered; and from these three causes combined the scepticism spoken of has become so fixed and prevalent that a proposition even to present a true classification for materia medica would be received with general indifference or aversion, and would be scouted by some.

The other expedient alluded to has been the introduction of a heterogeneous class, to "be regarded as a temporary and convenient

receptacle for those otherwise unclassifiable articles that experience has proved useful in disease."—*(Wood.)* It is not necessary that the articles it is to include should agree at all in their operative effects, or have anything in common except their inability to find a place elsewhere. This is the foundation of the class. We need no further proof of the imperfection of all our arrangements than a proposition of this kind, coming so recently and from a leading pharmacologist. It is hardly necessary to point out its effects to derange the whole system. Its adoption, however, might not be quite as disastrous as it would be for the manufacturer of a microscope to take up with a single translucent glass on account of his inability to procure a transparent one of the right shape. On the whole, it is no more irritational nor worse in its consequences than that of crowding these articles into an unnatural position and among others with which they have little or no affinity. But as before said, the worst effect of these mistakes has been to produce the impression that a pharmacological is in no way preferable to a botanical, chemical and zoölogical, or even to a simple alphabetical arrangement; and consequently many authors upon the subject have adopted an alphabetical arrangement only.

Foundations for the remaining Classes.

We now come to the main difficulty, that of selecting true foundations for the remaining classes. To make every operative effect fundamental would be impracticable, and such an arrangement would be useless if it were practicable; and, besides, it would not be in accordance with the plan. Of course, we are liable to make mistakes here, and except in regard to the twelve true classes mentioned, it is quite certain that mistakes have been committed heretofore. A mistake implies a rule; if, therefore, there are any rules or principles to guide us in solving this difficulty, these should be our first objects of search. There is one that will be sufficiently obvious, and that has been alluded to already. The classes must be kept different and distinct; they must not be allowed to encroach upon, run into or interfere with each other. Hence their foundations must be different and distinct. Whether this rule had been expressly laid down or not, it had been strictly followed in the formation of the twelve true classes. Perhaps another may be deduced from a critical examination of these, and comparing them in this respect with those that have since been added. From such an examination it will be seen that they differ essentially. In the one case the power on which each class is founded is not different and distinct from all others, but is direct, primary, inherent and essential, and, under ordinary circumstances, uniform and invariable. In the other it is only indirect, secondary, incidental or occasional, or dependent on circumstances. From this discovery alone, it may be inferred that the remaining classes should be in analogy in this respect with those

the genuineness of which is admitted; and this inference will be verified when we come to consider the consequences of disregarding it.

If these rules are strictly adhered to there will, of course, be no class founded upon the secondary, incidental, or occasional effects of medicines—effects that take place indirectly and by virtue of some power which is already the foundation of another class. If, for instance, the anthelmintics of most authors consist wholly of narcotics, cathartics, tonics, or articles belonging to some other class, and produce their anthelmintic effects by virtue of their narcotic, cathartic, tonic, or some other power, it is clear that there can be no different and distinct anthelmintic power, and upon this plan no foundation for such a class. It would not be distinct from the other classes, and its introduction would interfere with the consistency and naturalness of the arrangement, and impair its utility to a far greater extent than might be supposed at first thought.

Without thoroughly comprehending the plan and the principles on which it is to be carried out, a class of anthelmintics may seem not only simple and natural, but needful; but when it is seen to be so unlike the others, and to have its foundation in certain effects, borrowed, as it were, from several of the fundamental powers, and, furthermore, that it will be made up of articles as unlike each other as possible, having no analogy except in a single effect, and this only an accidental one, its spuriousness becomes apparent.

Such a class would be in analogy with a class of antirritants, which no one has proposed, and for the reason, doubtless, that antirritant effects are always indirect or secondary, and take place from the operation of one or another fundamental power, according to circumstances or the pathological condition in which irritation is to be allayed. Narcotics are the most reliable antirritants in one case, nervines in another, antiphlogistics in another, demulcents in another, and perhaps emetics or cathartics in others. An antirritant effect, therefore, cannot be regarded as fundamental, and for the same reason that there should be no class of antirritants there should be none of anthelmintics. Sedative effects are only secondary, and take place in different pathological conditions from the operation of widely different fundamental powers. To say that an article is a sedative, an antirritant or an anthelmintic, settles nothing in regard to its fundamental power or the class to which it belongs; and to say that it is an arterial sedative would not be at all more definite. We may have a suggestion to make in regard to an anthelmintic power, however, after presenting the catalogue of classes and their definitions.

Again, if the refrigerants of most authors comprehend only the antiphlogistics, diaphoretics and tonics, and produce their cooling effects by virtue of one or the other of these powers, it is clear that there can be no different and distinct refrigerant power, and upon

this plan no foundation for such a class. But to show the importance of the rules we are endeavoring to establish, it is not necessary to allude to all the instances in which they have been disregarded.

First, then, the power on which each class is founded must be different and distinct from all others; and second, it must be direct, primary, inherent and essential, in distinction from an effect which is only indirect, secondary, incidental or occasional. Though it may be found that each of these rules amounts to very nearly the same thing, or that a strict observance of either will lead to very nearly the same results, yet it is necessary that both should be stated. Though Dr. Tully adhered to the latter as closely as his predecessors had done in the formation of the twelve true classes, yet it was not expressly stated by him, and hence he was under the necessity of inserting the word direct or directly in most of his definitions of the classes, which, it must be remembered, are definitions also of the powers on which they are founded.

There is another way in which these rules have been disregarded, viz., by making two or more classes founded upon one and the same power. The two classes demulcents and emollients, made by some to depend upon one and the same power, and the articles of both, should be included in one class. The manner in which a power is applied, whether externally or internally, should not be made the foundation of a class. And the same may be said of the rubefacients, the epispastics and the escharotics, three classes introduced by some, all dependent upon a single power. The degree in which a power is exerted should not be made the foundation of a class. The effects of mistakes of this kind are not so bad as those of adopting secondary or incidental effects as fundamental, as the distinctness of the other classes will not be interfered with. But the rule is, that each different and distinct, direct, primary and inherent power should be made the foundation of a single class.

If these rules are observed, some classes of long standing, the genuineness of which has never been called in question, must be discarded; but after due consideration it will be seen that there can be no object in retaining them; or at least that their supposed advantages will be more than counterbalanced by the disadvantages arising from their want of analogy with others and their consequent injury to the system; and though it may still be convenient and even necessary to recognize certain groups of articles that agree in producing certain secondary or incidental effects, however widely they may differ in their fundamental powers, and to speak of them as antirritants, anthelmintics, cologogues, antilithics, &c., yet to regard such groups as legitimate classes and foist them in as such, would make a medley of the synopsis, render it unnatural, incongruous or inconsistent with itself, and consequently useless for all the more important purposes of classification. Those who insist that such classes should still be

retained, should consider whether these secondary instead of the primary effects should not be made the basis or foundation of all the classes, which will be found equivalent to making the symptoms or pathological conditions, or something that pertains to diseases rather than something which belongs to medicines exclusively, the foundation of a classification for materia medica. We are confident, however, that no one who adopts this course, in whole or in part, will be satisfied with his success, and he will be very likely to arrive at the conclusion that what he had undertaken as so desirable must be abandoned as impracticable.

But if the number of classes is to be lessened by discarding some that are old, it may be increased by admitting others that are new. These, of course, are to be founded, as the others have been, each upon a power different and distinct from all others, direct, primary, inherent and essential, and, under ordinary circumstances, uniform and invariable. Dr. Tully directs attention to five such, and to one other, which, though it may have occasionally, it has not generally, been made the foundation of a class. Their claims to this distinction, their analogy with others, their comparative importance and the necessity of their being isolated, defined and thoroughly understood as elementary therapeutical knowledge, will be more clearly perceived when examined in connection with the twelve already decided upon, and after presenting the entire catalogue and their definitions.

Recapitulation of Rules or Principles to guide us in making a true Classification for Materia Medica.

The plan proposed being the true one, the rules that have been laid down for its execution are not of any one's choosing; they are simply natural and inevitable. Though Dr. Tully did not state them all expressly, they are all deducible from his mode of procedure, and may be worth repeating and arranging in a code as follows:—

1. In a true classification, every article and every process that can be usefully employed in the treatment of disease, except those relating to nursing and hygiene, can find a place and must necessarily be included in some one of the classes.

2. The classes must be founded upon the powers or operative effects of medicines, and upon them alone.

3. Each class must be founded upon a power different and distinct from all others.

4. Only those powers that are direct, primary, inherent and essential, in distinction from those effects which are only indirect, secondary, incidental or occasional, are to be taken as fundamental, and the number of classes should correspond with the number of such powers.

5. The name of each class should correspond with the name of the power on which it is founded; should be appropriate and have

a precise and definite meaning, or a meaning that all will understand alike if possible.

6. Hence each power or class should be defined with clearness, accuracy and precision.

7. In classing or referring the articles, each article should be put where it naturally belongs, instead of forcing it into an unnatural position, or among those with which it has little or no affinity.

8. Each article possessing more than one, should be classed according to its useful rather than its useless powers, and those that are most prominent and useful should take the precedence and be most prominently represented in the classification.

9. Each article should have a place, be treated of in as many classes, and should have as many pharmacological appellations as it possesses useful fundamental powers.

To disregard either of these rules would destroy the integrity of the system and render it comparatively useless. It would be like leaving out or changing a single wheel in a complicated machine.

Names for the Powers or Classes.

Before we give the catalogue, it is necessary to add a few words about names for the powers or classes. It is as important that these should be right as that the powers themselves should be clearly defined and the classes rightly founded. Those only who have observed the very intimate connection of thought with its instrument—language—can comprehend why it is that every important change or improvement in a science almost necessarily involves some change in its nomenclature, or why improvements in its nomenclature must so often go hand in hand with improvements in the science itself. Lavoisier explains it in this wise:—

"The impossibility of separating the nomenclature of the science from the science itself is owing to this, that every branch of physical science must consist of three things—the series of facts which are the objects of the science, the ideas which represent the facts, and the words by which these ideas are expressed. Like three impressions of the same seal, the word ought to produce the idea, and the idea to be a picture of the fact; and as ideas are preserved and communicated by means of words, it follows of necessity that we cannot improve the language of any science without at the same time improving the science itself; neither can we, on the other hand, improve the science without improving the language or nomenclature that belongs to it. However certain the facts of any science may be, and however just the ideas we may have formed of these facts, we can only communicate false or imperfect impressions of these ideas to others while we want words by which they may be properly expressed."—*Preface Elements of Chemistry, translated by Kerr.*

While materia medica is susceptible of improvement, therefore, we ought not to be frightened at new names, nor squeamish at pro-

posed changes in its nomenclature. If Dr. Tully's classification is worthy of adoption, it may be found expedient to adopt his nomenclature also. Let us attempt what none of his fault-finders in this respect have seemed to think of, viz., to comprehend his reasons for the new names and the changes he proposed.

As it is particularly important that we should start in the right direction, though we may chance to deviate from it in the course of our journey, so in the pursuit of science we should first of all obtain a thorough knowledge of its rudiments. Clear and precise ideas of these are necessary to direct and facilitate our subsequent progress, at every stage of which we shall have occasion to revert to them; or, failing to do so, we shall wander from the true course, till we find it expedient to retrace our steps, take the points of the compass with more care, and start anew. And there is another reason why we should be particularly anxious to start aright; we are to have fellow-travellers, co-laborers, whose suggestions, aid and encouragement we shall need; and though not able to pursue the self-same path, we should keep within hailing distance, or at least be enabled to keep up such communications as would be seriously interfered with were we to take widely different directions. That pharmacologists may become co-workers, they must have some common ground to work upon—some starting point, at least, upon which they are wholly agreed. They can neither argue intelligibly nor converse to mutual profit without a common understanding of first principles. Here, if nowhere else, they should see eye to eye.

The fundamental powers, of which so much has been said, are the rudiments of pharmacology—its first principles—the facts to which all other pharmacological facts bear so intimate a relation. We cannot take too much pains to get clear, accurate and precise ideas of them; their number, their individual peculiarities, their similarities and dissimilarities, or their relationships, should be as fully understood as possible. It is not so often thought of as it should be, that accuracy and precision here are no more needed for the success of our individual efforts than to enable us to coöperate and become mutual helps. It is no more important, therefore, that we should have accurate and precise ideas of these powers ourselves, than that we should have the means of communicating them with accuracy and precision to others; and as we are to communicate and receive communications so frequently, we should be enabled to express our ideas, not only with accuracy and precision, but with facility, or without circumlocution.

Hence each of these powers should have a name that is precise and unequivocal in its meaning, such, if possible, as is not liable to be perverted or differently understood by different individuals; for just in proportion as we differ in our ideas of first principles, or in the precise meaning of the terms by which our ideas are expressed, are we incapacitated for making and receiving communications and coöperating to mutual benefit.

To establish first principles and bring medical men to a mutual understanding of them would be a worthy object for the medical reformer; and he who takes the initiative, points the way and suggests the means, though his success may not be all that could be desired at first, will deserve well of the profession. Poets and orators seldom possess the highest qualifications for scientific research. It has been truly said, "that which sometimes gives a charm to eloquence and poetry is the bane of true science."—(*Bronson.*) In science, and for particular uses like those now under consideration, words with a doubtful or double meaning, however significant and appropriate they may be elsewhere, have no meaning unless the precise sense in which the writer or speaker uses them in each instance is understood.

Some of the names already cited for the true powers or classes, are objectionable for the reasons intimated. For these Dr. Tully substitutes new ones. This is regretted by some and strenuously objected to by others. But suggestions that lead us to think more closely, to express our thoughts more clearly and definitely, enable us to understand each other more perfectly, and thus to coöperate and become mutual helps—recipients of the benefits of each other's labors—come not casually or by accident, are born not of pedantry but of genius, and ought not to be unheeded for slight reasons. There is a fastidiousness among medical men in regard to names, which, if not unfavorable to the progress of medical science, from the way it manifests itself is proof sufficient that its nomenclature needs to be revised. It does not show itself on all occasions, for it often happens that a new name, or a word once obsolete, but newly revived, comes into use without a sign of regret or opposition from any source. But for the most part these are of ambiguous meaning. No doubt those who write the words arterial sedative, zymotic, and others quite as ambiguous if not more difficult of pronunciation, think they are stating their opinions, their experiences, arguing or giving information, without suspecting even that their readers, not knowing precisely what is intended by them, will simply get their labor for their pains. Both writers and readers, however, if unaccustomed to evidence, may have a fondness for words that have the semblance of reasoning but signify nothing, and a dislike for those that have a precise and definite meaning, though they may have been selected on this very account to be used where accuracy and precision are especially needed.

[To be continued.]

THE statistics of military prison life on Johnson's Island, where 7771 rebel prisoners have been received during the last two years, show a mortality of only 210, or little more than 2½ per cent. The percentage of deaths among the United States prisoners confined at Salisbury, North Carolina, was more than nine times greater. That is, it reached to about one fourth of the entire number.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, APRIL 13, 1865.

Boston Hospitals.—The fifty-first annual report of the Trustees of the Massachusetts General Hospital and the first annual report of the Board of Trustees of the new City Hospital have made their appearance at the same time, and we trust that an abstract of them may not be without interest to our readers, even in these glorious days of victory.

The numerous changes which have taken place in the medical staff of the former institution during the past year are mentioned in becoming terms by the Trustees, and have been already noticed in these pages. Notwithstanding the increased expenses of living, its charities have been as generously bestowed upon every needy applicant as ever before, though the extract here given shows how great are the difficulties under which the trustees are obliged to struggle, and how important it is that the public should not overlook its home charities while ministering so liberally to those at a distance.

"The debt of the Corporation now amounts to $83,414.50, and has become a serious difficulty in the management of the institution. With no immediate prospect of any addition to our general funds, with no diminution in the cost of the necessaries of life, and with an obligation to continue to administer the great charities of the institution, it has become a source of anxious solicitude to the Trustees, how the expenditures of the present year are to be met, and how some limit may be placed upon the growth of the debt. The subject has been referred to a special committee of the board, and there is a reasonable expectation that the measures to be recommended for its adoption will receive the sympathy and aid of the community.

"It requires no argument here to prove the need or importance of the Hospital. For more than forty-three years, it has continued day by day its unceasing ministrations to the sick and suffering. It has been watched over and tended by our most skilful physicians, and has been sustained by a liberality on the part of its benefactors worthy of the warmest admiration. It has never been more useful or more needed than at the present moment, when the population of this city and neighborhood are rapidly increasing—when the cases of sickness and disease arising from the war become daily more numerous, and when the heavy expenses of food, raiment, and shelter, augment the difficulties of the poor, and especially of those requiring medical or surgical assistance."

By the report of Dr. Shaw, resident physician to the Hospital, it appears that the whole number of patients during the year was 1749—paying 361, free 1388. There were discharged during the year—well, 916; much relieved, 135; relieved, 255; not relieved, 84; not treated, 61; dead, 130; insane and eloped, 20. Males, 961; females, 640. Total, 1601. The proportion of deaths to the whole number of re-

sults is 8 per cent. The number of persons treated as out-patients was 5619, of which 3761 were medical, and 1858 were surgical cases.

Dr. Tyler, Superintendent of the McLean Asylum, presents the usual interesting account of the management of that division of the institution under his charge. The number of insane treated during the year is 302 ; the number admitted, 101—56 males and 45 females ; the number discharged, 107. Of the latter, 42—22 males and 20 females—were recovered. Twenty-one—10 males and 11 females—were much improved. Fourteen—7 of each sex—were improved. Three—2 males and 1 female—were not improved. And 27—15 males and 12 females—have died. A new building in the gentlemen's department has been erected, and the grounds have been enlarged and improved by the enclosure of separate airing courts. A large part of the report is devoted to a consideration of the necessity of hospital treatment for the insane and of the symptoms of incipient insanity, which would save infinite misery to many a household were its teachings more generally understood.

A list of the medical officers of the institution is here given :—

Board of Consultation.—James Jackson, M.D., John Jeffries, M.D., Edward Reynolds, M.D., C. E. Brown-Séquard, M.D., John Homans, M.D., Winslow Lewis, M.D., S. D. Townsend, M.D., H. I. Bowditch, M.D.

Officers of the Hospital.—Benjamin S. Shaw, M.D., *Resident Physician.* George C. Shattuck, M.D., Augustus A. Gould, M.D., Charles E. Ware, M.D., Francis Minot, M.D., Calvin Ellis, M.D., Samuel L. Abbot, M.D., *Visiting Physicians.* J. Mason Warren, M.D., Henry J. Bigelow, M.D., Henry G. Clark, M.D., Samuel Cabot, M.D., Geo. H. Gay, M.D., Richard M. Hodges, M.D., *Visiting Surgeons.* James C. White, M.D., *Physician to Out-patients.* Calvin Ellis, M.D., *Microscopist, and Curator of the Pathological Cabinet.* James C. White, M.D., *Chemist.*

Officers of the McLean Asylum.—John E. Tyler, M.D., *Superintendent.* Mark Ranney, M.D., J. H. Whittemore, M.D., *Assistant Physicians and Apothecaries.*

The Report of the Trustees and Superintendent of the City Hospital is published in connection with an account of the proceedings at its dedication, the act of the legislature and ordinance of the city relating to it, the rules and regulations, and a preface descriptive of the buildings ; the whole forming a pamphlet of 145 pages, embellished by a front and side view, sections and ground-plans of the edifice. In our account of the proceedings at the dedication in May last, we promised our readers some description of a building illustrating in so many respects modern improvements in hospital construction, which can, perhaps, be best redeemed by publishing the following extract from the preface :—

"The present buildings are six in number : the central building, two pavilions, the boiler house, gate house, and horse sheds. The central building, which is 80 feet by 60, is connected with the pavilions by corridors open above and closed in below, and contains in the basement story a store room, apothecary's shop, laboratory, dining room for the employés, the kitchen and other rooms necessary for the culinary operations of the Hospital. Upon the first floor are

the rooms occupied by the Superintendent and his family, the Superintendent's office, and the business room of the Trustees, which is also used for the reception of visitors. The second story consists of apartments for pay-patients; in the third story are rooms for the temporary use of ophthalmic patients, and closets for storage; and above is a spacious operating room, octagonal in form, suitably lighted, heated, and ventilated, with seats for about 175 students. Patients are brought to the operating room from all the lower stories by means of a lift moved by machinery, situated in the basement story.

"This building is surmounted by an iron dome with a cupola, the apex of which is 148 feet above the level of the street.

"The two pavilions are substantially alike in their construction. They are 148 feet in length and 48 in width, three stories in height beside the basement. In the basement of each are the nurses' kitchen and store room for supplies, small wards for the temporary accommodation of patients, and also a room appropriated for the clothing of the patients in the pavilion, which is arranged with stationary boxes, numbered to correspond with the beds. In the first, second, and third stories are large wards, with dining rooms for convalescent patients, nurses' chambers, bath rooms, water closets, and other conveniences, room for the attendant resident graduates, and a consultation room for the surgeons and physicians. These wards are each 80 feet long and 27 feet 8 inches wide. The two lower are 16 feet, and the upper 10 feet in height. Each ward will accommodate comfortably 28 patients. The Hospital furnishes ample accommodations for 225 patients, and should occasion require 275 might be admitted. The Hospital is furnished throughout with the Tucker patent iron bedsteads, furnished with an attachment for raising the head of the patient. As the bedsteads are constructed with a wooden spring bottom, one hair mattress only is required for each. * * * * *

"The Hospital is warmed and ventilated by a system recently introduced into this country, with some important novelties never before applied. Air forced through ducts, by means of a large fan at the boiler-house, and warmed by coils of steam-pipes placed in these ducts, is carried to every part of the buildings, thus affording the means of heating as well as ventilation. Direct radiation is provided for in a portion of the rooms, to be used in case of necessity. The steam pipes over which the air passes for heating the different apartments in the central building, are placed in coils in chambers connected with the air ducts. Those for heating the pavilions are located in the air passage, beneath the floor under the corridors leading to the pavilions. The passage through which the air passes after having left the main duct on its way to the pavilions, is divided into two compartments, in one of which is located coils of one inch wrought-iron pipe. The steam, after passing from the boilers in a large iron pipe, is distributed through these coils, being regulated by valves under charge of the engineer. After passing through the coils it enters a steam trap located at the foot of the coil, which is so constructed that no steam can pass, where, after being converted into water, it is conveyed through a cast-iron pipe to a reservoir, located at the head of the air duct; from thence it is pumped into the boilers at a temperature of from 180 to 190 degrees; that this process saves fuel and water is proved from the fact that the boilers have been used for several

days without any but the water so returned. Through the other compartment, cold air passes. These two compartments are so arranged that the cold and warm air are brought together in the several wards where they come in contact, before entering the room, by a simple apparatus which can be controlled by the nurse or attendant. By this arrangement the *atmosphere* in each ward can be changed every thirty minutes; the *temperature,* however, remaining the same, and without causing any perceptible current in the ward. The foul air passes from the wards through registers at the sides, which are also under the control of the attendants. In each of the two middle wards are four marble fire-places, which are also arranged for ventilation.

"During the short period which the Institution has been in operation, the heating and ventilation have been found agreeable and satisfactory.

"In the office of the Superintendent is placed a standard regulating clock, which, independent of its electrical mechanism, presents some novel features; having two mercurial pendulums so connected and controlled as to vibrate perfectly together, and to act the one upon the other, mutually checking any tendency of either toward irregularity of oscillation."

"In the principal hall and in the distant wards are placed the electric companion clocks (five in number), which have a simple mechanism; consisting of a lever which, when lifted and allowed to fall by its own gravity, moves an "escapement," so constructed as to be propulsive, and continuous in its hold upon a single toothed wheel. This wheel and its arbors—which communicate directly with the motion work controlling the differing action of the hour and minute hands—is the substitute for "the train" of a common clock; therefore requires no pendulum, weights, springs, or winding up; and moves only when magnetism, generated by electricity, is induced in the electro-magnet which acts upon the lever before mentioned.

"The system not only secures uniformity of time in the different parts of the Institution, but relieves the Superintendent of the care of many clocks, and the wards of the ticking which marks the seconds of passing time—generally so annoying to the sick or the suffering patients.

"Attached to the standard clock is also the patent mechanism which constitutes it an *electro-magnetic watch-clock.* By this the perambulations of the night watchman over the premises are legibly recorded, in such manner that the Superintendent may know not only whether the watchman has been vigilant, but also the precise time of his passing through the different parts of the buildings. The apparatus, like the time system, is operated on the same *principle* as that of the electric telegraph, the watchman in this case being the operator, simply by turning a key, in different parts of the premises, which act momentarily establishes and again breaks the electric circuit, and causes the instrument to record, from time to time, the presence of the watchman at the different points which his instructions require him to visit."

Since the opening of the Hospital in June last, a period of seven months, the number of patients and results have been as follows:—Males admitted, 288; females admitted, 187. Total, 475. Discharged, 327; deaths, 47; remaining in Hospital, 101. Total, 475. Out-patients treated at the Hospital, medical and surgical, 195; out-patients

treated at the Hospital, ophthalmic, 176. Total, 371. Average number of patients, new and old, in attendance upon visiting days in the Ophthalmic Department, 25. Whole number of patients treated at the Hospital from June 1 to Dec. 31, 1864, 846. Tables of the diseases treated and their results, of accidents, operations and causes of death are presented by the superintendent, and form a very valuable addition to the report. The nature of the operations in the ophthalmic department was as follows :—

NATURE OF OPERATIONS.	Males.	Females.	Total.	Successful.	Unsuccessful.	Relieved.
Cataract	16	12	28	22	3	3
Enucleation	3		3	3		
" by Critchett's method	1		1	1		
Iridectomy	10	1	11	10	1	
Iridesis	2		2	2		
Total	32	13	45	38	4	3

The objects of the Hospital are thus stated by the Trustees :—"It may not be unnecessary to repeat what has been so often stated, that this is not, in the strict sense of the word, a free hospital. It is free to those industrious persons who, from sickness or misfortune, have been temporarily disabled, and who can on recovery maintain themselves. Neither is it intended for the reception of paupers, for whom ample accommodations are provided elsewhere. It is designed to do the greatest good to the greatest possible number, and for this reason chronic and incurable cases, which would speedily and permanently fill the wards, are not received. Accommodations for this class are greatly needed, and we trust the time is not distant when private charity shall have founded an institution for this object, which shall be worthy of an enlightened and liberal community." The deaths of Drs. Ware and Dalton, and the resignation of Dr. Homans, sen., has made several changes necessary in the list of officers of this institution also, although so recently founded. The present medical and surgical staff is composed of the following gentlemen :—

Consulting Physicians and Surgeons.—S. D. Townsend, M.D., Edward Reynolds, M.D., Winslow Lewis, M.D., John Jeffries, M.D., Silas Durkee, M.D., A. A. Gould, M.D. *Visiting Physicians.*—Wm. W. Morland, M.D., Fitch Ed. Oliver, M.D., J. Baxter Upham, M.D., J. N. Borland, M.D., J. G. Blake, M.D., John P. Reynolds, M.D. *Visiting Surgeons.*—C. H. Stedman, M.D., C. E. Buckingham, M.D., D. McB. Thaxter, Jr., M.D., Charles D. Homans, M.D., Algernon Coolidge, M.D., David W. Cheever, M.D. *Ophthalmic Surgeon.*—Henry W. Williams, M.D. *Admitting Physician.*—Howard F. Damon, M.D. *Pathologist.*—Charles W. Swan, M.D.

Dr. William Johnson Walker, who died at Newport, R. I. (where he had resided for the last four years), on Sunday last, was a son of the late Major Timothy Walker, a prominent citizen of Charlestown, of the last generation, and a cousin of the Rev. James Walker, D.D.,

of Cambridge. He was born in Charlestown in 1790, graduated at Harvard College in 1810, pursued his medical studies with Governor Brooks of Medford, and continued them abroad, having the field of Leipsic among his opportunities. For skill in the treatment of disease as a surgeon, he had no superior in the State during the many years in which he practised his profession. Some marked peculiarities of character were unfavorable to his universal popularity as a man, but he always secured the confidence of some of the warmest and most devoted friends. Among his numerous patients he was regarded with feelings of gratitude and esteem, and no man ever performed more acts of private kindness than he, especially toward the lowly and the poor.

Dr. Walker gave up the practice of his profession nearly twenty years ago, much to the grief of those who, having had experience of his skill and tenderness, could not but regard it as a wrong that he should cease to use his wonderful talent in the direction of merciful ministrations to the sufferings of his fellow creatures.

After giving up his profession, Dr. Walker turned his attention to financiering, and during the last few years has accumulated a very large property, by the exercise of his shrewdness in investments rather than in any bold speculations. He had in these years given away some four hundred thousand dollars, and is thought to have left at least a million and a quarter to be disposed of according to his last will.

He leaves a widow—the daughter of the late Joseph Hurd of Charlestown—four daughters, one son, and the widow and children of another son. His will divides equally among these seven heirs about two hundred and twenty thousand dollars, or a little more than thirty thousand to each. He gives about forty thousand dollars, in legacies of a thousand dollars each, to women of his acquaintance, mostly friends of his early years. The remainder of his great estate, being nearly or quite a million, he divides equally to Tufts College, Amherst College, The Institute of Technology, and The Boston Society of Natural History. It is understood that he had proposed to make Harvard—his Alma Mater—the chief recipient of his munificent gifts, but that he imposed conditions or restrictions which were not acceptable. Amherst and Tufts Colleges will have occasion to place a high estimate on his large generosity to them. He is another of many Unitarians like the Lawrences, Chandler, Munson, &c., who have looked beyond sectarian limits in the distribution of great bequests.—*Transcript.*

At a meeting of the Boston Society of Natural History, held on the evening of April 5th, 1865, the President announced the decease, at Newport, on April 2d, of its liberal benefactor, Dr. W. J. Walker, and offered the following resolution, which was passed unanimously:

"*Resolved*, That the Boston Society of Natural History recognize in the death of Dr. William Johnson Walker the loss of their greatest benefactor, and in view of his munificent gifts to this Society and his beneficent aid to the cause of Education and Science, we would ever hold his name in honorable and grateful remembrance."

The annual meeting of the Suffolk District Medical Society was held on Wednesday, April 5th, at 4, P.M., at its hall in Temple Place.

During the past year, twenty-five (25) new members have joined the Society, and eight (8) members have died. The following list of officers were elected for the ensuing year:—*President,* Dr. J. Mason Warren. *Vice President,* Dr. Francis Minot. *Secretary,* Dr. John Green. *Treasurer,* Dr. C. D. Homans. *Librarian,* Dr. C. Ellis. *Supervisors,* Drs. G. H. Gay, D. McB. Thaxter (So. Boston). *Commissioner on Trials,* S. Durkee. *Censors.*—Drs. F. E. Oliver, J. N. Borland, J. P. Reynolds, D. W. Cheever, H. F. Damon. *Councillors.*—Drs. J. Bigelow, J. Homans, J. Jeffries, A. A. Gould, J. Flint, P. M. Crane (E. Boston), D. H. Storer, J. B. S. Jackson, E. Palmer, H. I. Bowditch, J. M. Warren, G. C. Shattuck, H. J. Bigelow, C. E. Buckingham, H. G. Clark, S. Cabot, Jr., J. Ayer, C. E. Ware, A. B. Hall, J. B. Upham, S. L. Abbot, A. A. Watson, W. W. Morland, W. E. Coale, G. Hayward, H. W. Williams, F. Minot, B. Brown, J. B. Forsyth (Chelsea), C. Ellis, C. D. Homans, W. G. Wheeler (Chelsea). *Delegates to the American Medical Association.*—Drs. J. Bigelow, C. E. Buckingham, D. W. Cheever, A. Coolidge, John Dean, J. S. H. Fogg, A. A. Gould, G. Hay, O. W. Holmes, R. M. Hodges, G. S. Hyde, J. S. Jones, Charles Mifflin, H. K. Oliver, G. H. Nichols, Alex. Poole, J. P. Reynolds, A. Ruppaner, B. S. Shaw, D. D. Slade, D. H. Storer, W. H. Thorndike, W. E. Townsend, J. C. White. *Committee on Social Meetings.*—Drs. J. Ayer, H. I. Bowditch, C. D. Homans, C. Stevens, C. G. Page.

JOHN GREEN, *Secretary.*

DR. DEAN'S University Course of Lectures is again postponed, on account of continued illness. Due notice will be given of their commencement.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, APRIL 8TH, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	52	51	103
Ave. mortality of corresponding weeks for ten years, 1853—1863,	40.9	39.3	80.2
Average corrected to increased population - - - - -	00	00	88.22
Death of persons above 90 - - - - - - - - -	0	0	0

PAMPHLETS RECEIVED.—Annual Report of the Trustees of the Wisconsin Hospital for the Insane.—Proceedings of the Nineteenth Annual Meeting of the Ohio State Medical Society, June 21st and 22d, 1864.—Special Report on Prisons and Prison Discipline, under authority of the Board of State Charities in Massachusetts.—The Medical Profession, &c.; an Address delivered by Ezra M. Hunt, M.D., President of the Medical Society of New Jersey, at its 99th Annual Meeting, Jan. 29th, 1865.—On the Direct Influence of Medicinal and Morbific Agents upon the Muscular Tissue of the Bloodvessels, by R. Cresson Stiles, M.D., Physician to Kings County Hospital, N. Y.

DIED,—At Newport, R. I., suddenly, on the 2d inst., Dr. William J. Walker, formerly of this city, and well known as a most liberal contributor to many scientific and other public institutions in the State—aged 74.

DEATHS IN BOSTON for the week ending Saturday noon, April 8th, 103. Males, 52—Females, 51. Accident, 3—apoplexy, 2—inflammation of the bladder, 1—inflammation of the bowels, 1—congestion of the brain, 2—disease of the brain, 3—inflammation of the brain, 1—bronchitis, 3—consumption, 16—convulsions, 4—croup, 3—diarrhœa, 4—dropsy of the brain, 4—drowned, 2—epilepsy, 1—erysipelas, 1—continued fever, 1—scarlet fever, 1—typhoid fever, 1—disease of the heart, 5—infantile disease, 2—intemperance, 1—disease of the kidney, 2—inflammation of the lungs, 11—marasmus, 2—measles, 2—old age, 3—paralysis, 1—peritonitis, 1—pleurisy, 1—premature birth, 4—puerperal disease, 1—rheumatism, 1—smallpox, 3—disease of the spleen, 1—syphilis, 1—thrush, 1—unknown, 6.

Under 5 years of age, 40—between 5 and 20 years, 6—between 20 and 40 years, 21—between 40 and 60 years, 19—above 60 years, 17. Born in the United States, 65—Ireland, 24—other places, 14.

THE

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THE ACTION OF CAUSES OF DEPRESSION IN THE PRODUCTION OF STRUCTURAL CHANGE; THE PATHOLOGICAL ANATOMY OF PNEUMONIA.

[Read before the Boston Society for Medical Improvement, March 27th, 1865, and communicated for the Boston Medical and Surgical Journal.]

BY CALVIN ELLIS, M.D.

SEVERAL months since, the writer reported to the Society the case of a healthy man who fell and fractured one kidney. Double pneumonia followed, and soon terminated in death. Both kidneys were very soft, and under the microscope showed so great a multiplication of the cells of the tubuli that the latter were entirely filled. It was then suggested that the shock caused by so grave an accident manifested itself in disease of a precisely similar character in both lungs and kidneys, viz., a multiplication of cell-elements. To explain this I must refer to what I regard as the true pathological anatomy of pneumonia, as opposed to the description usually given. Repeated observations of my own, corroborated by those of others to whom the point has been mentioned, enable me to state that there can no longer exist any doubt that the usual explanation of hepatization is incorrect. The inflammatory process in the lungs does not differ at all from that in other parts of the body. It is characterized here as elsewhere by the development of cells or nuclei. As hepatization progresses, the fibres of the pulmonary tissue are more and more obscured by granular corpuscles of about the size of pus globules, but generally without the peculiar nuclei, though true pus globules may in some cases appear. The change of color is attributable entirely to the accumulation of these elements and the disappearance of blood. Fibrin is, also, probably formed, but it is not seen in specimens prepared in the usual way. This view is, of course, opposed to the old idea of stages, to which the terms congestion, red and gray hepatization have been applied. *Congestion* does not constitute inflammation, here or under any circumstances, although it gene-

rally accompanies it. *Red hepatization* corresponds with that part of the process in which the corpuscles have not accumulated sufficiently to destroy the red color, while they have multiplied so much as to increase the density of the part. *Gray hepatization* implies that the elements have multiplied until they have given their own peculiar tint to the tissue. There is, therefore, no real line to be drawn between the two. The appearances vary infinitely, according to the exact stage of the process.

If the facts be as stated, it is certainly proper to regard the changes in the lungs and kidneys as similar, although the exact portions of pulmonary substance affected have not been ascertained. If it should be shown that the elements of the connective tissue in one case are involved, and in the other the epithelium alone, we must still admit that in both a remarkable development of cell-elements takes place.

In a case of pyæmia, examined a few days since at the hospital, a large part of the right lung presented that firm, blackish, ecchymosed appearance so often noticed previous to the formation of pus. The kidneys were also softened. A microscopic examination of the latter showed the same increase of cells in the tubuli as in the first case. In a third instance, where both lungs were affected with pneumonia, the kidneys showed the same change as that previously reported, and, as in the last case, the bladder contained scarcely any urine.

These three instances are not introduced as sufficient in themselves to prove anything, but we are justified in saying that they suggest the possibility of the production of grave structural disease by causes which deeply affect the system. That various affections are thus produced has always been admitted, but an anatomical demonstration of changes in several parts, which have no apparent connections, has not been given. It is not my intention to assert that the lungs and kidneys are especially liable to such changes. A careful examination of other solid organs may show similar changes in them. Variations in the first two are more readily detected, owing to their peculiarities of structure, but some special preparation of sections of the liver and spleen would be necessary to show an equal amount of change.

If the above conclusions should be substantiated, they would have a very important bearing upon the meaning of some pathological changes now overlooked or improperly connected with symptoms which have long existed. No attempt has been made to give the details of the cases, as they could prove nothing. It is hoped, however, that the attention of others may be directed to the points especially insisted upon, whether to disprove or corroborate them.

REVIEW OF DR. TULLY'S SYNOPSIS OR CLASSIFICATION.

[Continued from page 221.]

STIMULANT, the second mentioned in the list, is perhaps the most objectionable, and may be taken to illustrate the principles to be inculcated or the errors to be avoided in regard to names. Various and widely-different fundamental powers, as well as several secondary or incidental effects, are constantly spoken of as stimulant, while some teachers of medicine maintain that every curative, salutary or truly remedial, is a stimulant effect, thus making the words stimulant and medicinal co-extensive in signification. Alcohol and bloodletting, cinchona and antimony, when they exert salutary or remedial effects are, according to this theory, stimulants. No good can come from thus confounding things so directly opposite.

This term, therefore, has been so loosely and vaguely applied as to be no longer fit for scientific use, and has been so long running at large that any attempt to bring it back and confine it by a definition would be vain. Etymologically it is not wholly appropriate or exactly consonant with the idea to be represented, and consequently were it not for the extreme latitude given it heretofore and the difficulty of confining it now, it would be extremely liable to perversion, or to be differently understood by different individuals.

These must be considered as all-sufficient, though Dr. Tully had one other reason for changing it. The power he intended to designate is the exact opposite of antiphlogistic. The distinguishing characteristic of the one is to increase, that of the other to diminish the vital power. Two things standing in this relation should have cognate names, or names of similar origin or derivation. This may be necessary for precision, or to express with the clearness needed their antagonistic relations. At all events, uniformity in such a case, if not absolutely necessary is desirable; and finally, in every other science, the revision of which has been entrusted to the most competent hands, uniformity in the names of all the classes has been sought and obtained.

The mere matter of taste is not worth alluding to, perhaps, but would it not look awkward and unscholarly to see some of the names of the classes Greek, some Latin, and some English; and ought the man of taste and of undoubted competency who attempts to obviate such a deformity, especially while accomplishing another and still more important object which gives him the opportunity, to be accused of "fastidiousness," "pedantry," or of being "too much given to classical Greek"? It should be observed, moreover, that from time immemorial most of the names for the classes in materia medica have been in analogy with those Dr. Tully suggests; and yet we hear nothing of its earlier cultivators being accused of "an unnecessary display of learning," or of "too much fondness for classical Greek."

Though some substitute for the name stimulant was perhaps the most urgently called for, yet the reasons in this case were the same that existed in others when changes are proposed. But the significance and appropriateness of the new names, their analogy with those to which we have been accustomed and the expediency of adopting them, can be better judged of after examining the entire list of names, their etymologies and definitions. In most of the other cases, however, as in the one just alluded to, it will be seen that the new names cannot be regarded as exact substitutes for the old ones. The ideas themselves, if not new, are more limited and restricted, and require new names to represent them.

The question of adopting or rejecting a name may be as rationally and satisfactorily settled as any other, but the misfortune is, it is very likely to be settled for us, and by those who are unwilling or incompetent to give it the necessary consideration. To object to new names on account of the "embarrassment thereby introduced," would be very like setting ourselves against all changes or improvements on account of the extra labor that would be imposed upon us. Such objections are inadmissible, to say the least, till it has been shown that the actual effect as well as the intention, in either case, will not be to release us of embarrassments and facilitate our labors.

If "unneeded names are unmitigated nuisances," those most eager to "pitch them into the gutter" may not be the best qualified to judge whether they are needed or unneeded. And if we have "a redundancy of names already," this can be attributed to nothing but our having adopted so many that are inappropriate. The way to remedy the evil, therefore, as well as to prevent its constant increase, is obvious. But to disparage such an undertaking by a man of rare qualifications, without fully comprehending its merits, would be to put learning at a discount and ourselves in opposition to the advancement of science.

If science, when allowed, expands and enlarges our ideas, we are obliged to take constant care to limit and restrict them while maturing its details. If "new names do not give new knowledge, do not enlarge our ideas," they may answer the more important purpose of limiting and restricting our ideas, thus rendering knowledge more precise and accurate, besides enabling us to communicate it with accuracy and precision to others.

If Dr. Tully's new names "are without special significance," they must be so to those only who have not examined them closely and compared them with others in this respect; or, perhaps, to those who have not been sufficiently impressed with the evils arising from the use of equivocal or ambiguous terms—"the false ideas and unfounded hypotheses so often involved in accustomed words and phrases," the short and long, but profitless controversies, to say nothing of acrimonious disputes, that may have arisen from a mutual misunderstanding of the parties at the very commencement of their

subject, and perhaps as to the precise meaning of a single word. To avoid these and similar evils, truths, and especially fundamental truths, should be expressed in terms as brief, as direct and as unequivocal as possible."

Some have spoken in high praise of Dr. Tully's classification, and considered it far superior to any before offered, but found fault with its nomenclature. This reminds us of the congressman, who, after making a speech strongly in favor of a bill, offers an amendment for the very purpose of defeating it. To us the nomenclature is an essential part of the classification. To reject the one would be to deprive the other of most of its excellencies.

For the new powers, or those for the first time recognized as fundamental, the names must be new of course, and no fault can be found with them for being in analogy with those used heretofore. If "long and hard," they are no more so than those to which we have been accustomed. Nausiatic, neuragic, erethistic, oresthetic, admagic and ergastic are no longer nor harder than cathartic, diaphoretic, diuretic, expectorant, lithontriptic or emmenagogue. To answer the purposes required they must necessarily be uncouth. Nor is leantic more difficult of pronunciation than either demulcent or emollient, of which it is proposed instead. The same may be said of euphrenic as compared with antispasmodic or nervine; antisbestic as compared with stimulant, excitant or incitant; styptic as compared with astringent; antoxyntic as compared with antacid, for which they are proposed as in some sense substitutes. Antisbestic, intended to be the exact opposite of antiphlogistic, is the name substituted for stimulant, though the latter has no meaning, except when the writer or speaker gives his own definition of it. Antisbestic is as short and as easy of pronunciation as antiphlogistic, and the former is no more uncouth than must have been the latter at first. But the question ought not to be decided according to their length, hardness or uncouthness. For the most part, each of the new names has a more precise and definite meaning, and sometimes a meaning essentially different from the old ones.

The reason that names that have been long in use and become popularized have so often lost their precision and acquired an indistinctness and uncertainty of meaning, and thus become unfitted for scientific purposes, is simply because they have never been clearly and accurately defined. Those who will examine Dr. Tully's definitions and compare them with others in this respect, will have no fears that his names, even on passing into general use, will become vague and uncertain, or that on this account there will again be a necessity for a new nomenclature.

We have mentioned all the new names and all the changes proposed by Dr. Tully, have stated his reasons for them, and think them sufficient. It would be easy for any one so disposed to prejudice his undertaking by commenting on the liberty he has taken in this

respect, showing the insufficiency of those reasons which he himself admitted were of minor importance, but omitting or perverting those which, if fully and fairly presented, might prove convincing to every intelligent and unprejudiced reader. There would be no apology for those, if there are such, who, after fully comprehending the force and adequacy of these reasons, have nevertheless felt disposed to cater to the general prejudice against changes and innovations by talking about technicalities and abstractions, too much profundity, unnecessary learning, new-coined, long, hard and uncouth words, &c., but all such talk will go for little or nothing with one who thinks closely, who wants evidence and knows when he gets it.

Arrangement of the Classes among themselves.

No one thinks of interfering with the present arrangement of the letters of the alphabet, and yet it may not be the very best that could have been devised. There were, apparently at least, as good reasons for keeping the vowels and consonants distinct, as those of Dr. Tully for dividing the classes of materia medica into five distinct groups. Again, if there would be some advantages in having those most nearly alike in juxtaposition, there would be others in considering those that are most unlike, as in the case of the antiphlogistics and stimulants, one immediately after the other. But as he attached very little importance to this arrangement himself, we shall not adopt it. It will answer our present purpose better to divide them into two groups only, the old and the new; in each of which they will be arranged according to their importance, rather than their similarities or dissimilarities. Upon this subject, however, we may have a suggestion or two to make in passing.

It should be remarked, that the success of such an undertaking is not to be judged of by simply running over the names of the classes. If perfect, this will not be seen at a glance. A true classification, one that would answer all the requirements and be adopted at last, would be very likely to be unpopular at first. There would be two ways of testing its genuineness; first, by becoming familiar with it and realizing its benefits by experience in its use. This would be satisfactory to all, and the only one that would be so to popular minds; second, by a critical examination of its plan, perceiving its adaptation to the purposes intended, comprehending the difficulties that were encountered in its execution and the manner in which they were overcome. But popular minds have no inclination for this kind of research, will look upon the whole of it as so much hair-splitting, and demand, perhaps, that its truth and genuineness should be comprehensible without much study; than which no demand can be more unreasonable. From the nature of the case, until we have realized its benefits by the long test of experience, its truth and value can be known only by the critical examination suggested. Instead of becoming popular at once, it is far more probable that a gene-

ration, perhaps a century, would elapse before it would be generally received. But this will dampen the ardor of no true scholar when once impressed with the magnitude of the undertaking, nor reconcile him to the inconveniences he is to suffer till it is accomplished—the thought and labor he is to bestow without sufficiently definite objects in view; the facts he gains without knowing their value, where to put or how to use them; the difficulty he experiences in communicating his own thoughts and in fully comprehending the thoughts of others; his inability to generalize and arrange his knowledge to make it most available for the grand object for which he feels pledged to devote his industry and awake his enthusiasm. He may be encouraged by the hope that when its truth is perceived by a few leading minds, it will be accepted by others, till it comes into more general use, after which its advantages will be developed from year to year, as has happened in similar cases.

Catalogue of the Classes.

OLD CLASSES.

1. Antiphlogistica.
2. Antisbestica *(stimulants, excitants or incitants).*
3. Tonica.
4. Emetica.
5. Cathartica.
6. Diaphoretica.
7. Diuretica.
8. Narcotica.
9. Euphrœnica *(nervines or antispasmodics).*
10. Styptica *(astringents).*
11. Leantica *(demulcents and emollients).*
12. Antoxyntica *(antacids).*

NEW CLASSES.

13. Adenagica *(deobstruents or alteratives).*
14. Erethistica *(acrid narcotics).*
15. Orœsthetica *(acrid stimulants).*
16. Neuragica *(mineral sedatives).*
17. Nausiatica.
18. Ergastica.

Definitions.

Dr. Tully's definitions are said to be far superior to any others, and by those who find fault with his work in other respects. Others think them too prolix. Though in so important a matter as defining the fundamental powers, clearness and precision ought not to be sacrificed to brevity or conciseness, yet he often uses words that are obviously superfluous, some of which we shall omit. It will not be necessary to repeat his definition of the spurious classes.

ANTIPHLOGISTICA is a term composed of a Greek preposition sig-

nifying *against*, and a derivative of a Greek verb signifying *to inflame*, and has been in use time immemorial.

Definition. — Antiphlogistics directly diminish vital energy and strength of action in the circulating system, and indirectly lessen vigor generally, thereby diminishing or obviating entonic, sthenic or phlogistic diathesis, when it exists, and (except in the case of depletion of blood and catharsis by the antiphlogistic salts) independent of any evacuation as a necessary part of their operation.

ANTISBESTICA is made up of a Greek preposition signifying *against*, and a derivative of a Greek verb signifying *to extinguish, to exhaust, to quench*, &c. Antisbesis, i. e., the operation of an antisbestic, signifies *extinction, exhaustion, quenching*, &c.

Definition.—Antisbestics directly produce a quickly diffused and transient increase of vital energy and strength of action primarily in the sanguiferous or circulating system, and in all the parts dependent upon the nerve of chemical action, nutrition and reproduction, commonly called the great sympathetic nerve; thereby obviating, or contributing to obviate, atony, exhaustion or debility in the parts specified, when it exists.

TONICA is derived from a Greek word signifying *tension, firmness, strength, force*, &c.

Definition.—Tonics are agents which directly produce a slow, gradual and permanent, but moderate increase of vital energy and strength of action of a peculiar character, primarily in a part and secondarily in the whole system.

EMETICA. *Definition.*—Emetics are articles which, when taken into the stomach, independent of odor, taste or bulk, directly produce, *first*, upward peristaltic action of the stomach and œsophagus; *second*, usually a violent and apparently spastic action of the muscles of expression, especially those of the trunk, which is commonly known by the term retching, by means of which there is more or less perfect rejection of the contents of the stomach by the mouth; *third*, increased secretory activity of the mucous follicles of the stomach; and, if the vomiting is violent and protracted, the secretion from the pancreas and liver. In most cases the operation is attended with more or less nausea.

CATHARTICA. *Definition.*—Cathartics directly produce, *first*, a secretion of air into the upper and smaller intestines; *second*, a secretion of serum into the same cavity, both secretions being from the mucous follicles; *third*, an increased secretion from the liver and probably from the pancreas; *fourth*, preternaturally increased downward peristaltic action of the whole intestinal canal, by means of which there are preternaturally frequent and preternaturally liquid alvine discharges.

DIAPHORETICA. *Definition.*—Diaphoretics are articles that by a direct operation upon the cutaneous hydrothermal excretions, restore the elimination of the effete heat of the system in a latent state in

combination with water so as to constitute vapor; augment it when diminished; and produce an excretion of mere water when it was previously in a normal state; without any other influence upon any other part of the secernent and absorbent or glandular system, and without increase or diminution of vital energy and strength of action, but merely by an increase of excretory activity.

DIURETICA. *Definition.*—Diuretics are articles which by a direct operation upon the kidneys, restore the excretion of all those effete elements which pass off as salts held in solution by water when suspended, augment it when diminished, and increase preternaturally the proportion of water in this excretion, without any influence upon any other part of the secernent and absorbent or glandular system, and without increase or diminution of vital energy and strength of action, but merely by an increase of excretory activity.

NARCOTICA. This term is not very appropriate. It signifies "*having the property of stiffening, benumbing, or rendering insensible.*"

Definition.—Narcotics, in the *first* degree of their operation, directly allay morbid irritability and irritation, morbid sensibility and sensation, morbid restlessness, jactitation and watchfulness when connected with a non-phlogistic or positively atonic condition of the system; in the *second* degree of their operation they directly relieve pain; in the *third* degree of their operation they produce more or less somnolency or even positive sleep; in the *fourth* degree of their operation they produce vertigo, headache, faintness, dimness of sight, the sensation of a cloud before the eyes or some imperfection of vision, either with great dilatation or extreme contraction, or an immovably fixed but otherwise natural state of the pupils; nausea and retching, with epigastric uneasiness especially when the head is raised or otherwise much moved; small, irregular pulse; cold extremities; cold, clammy or slippery sweats; delirium; convulsions, succeeded by coma and sometimes death.

EUPHRÆNICA. This term is derived from a Greek word signifying *to gladden, to delight, to cheer, to amuse, to render gay, to exhilarate.* Euphrasy may be used to denote the effects of a euphrenic.

Definition.—Euphrenics in the *first* grade of their operation obviate languor and lassitude when they exist; *second,* produce a peculiar calm, placid and pleasant state or condition; *third,* a peculiar and rather agreeable preternatural wakefulness; *fourth,* more or less positive exhilaration, which by some articles is increased to such a degree that the actions of the subject are not under the control of his will, and perhaps amount to actual delirium; *fifth,* a complete anæsthesia or destitution of common sensation; or a state of insensibility to pain, sometimes with and sometimes without loss of consciousness.

STYPTICA is derived from a Greek verb signifying *to constringe, to constrict, to contract, to condense, to thicken,* &c. Stypsis denotes the effects of a styptic.

Definition.—Styptics are articles which produce a vital contraction and condensation of the soft solids, together with increased absorption and diminished excretion, particularly in diseased parts.

Leantica is an ancient Greek word which signifies *alleviating, assuaging, calming, soothing,* &c.

Definition.—Leäntics are articles which independent of antiphlogistic, neuralgic, narcotic or euphrenic powers, but by virtue of a peculiar impression made by a mucilaginous, amylaceous, saccharine, oleaginous or gelatinous principle, or by heat and moisture conjoined, or some combination of these, allay irritation in various parts, alleviate phlogistic soreness, swelling and pain, and contribute either to a resolution or suppuration according to the stage or other circumstances of the case.

Antoxyntica. *Definition.*—Antoxyntics are articles which combine with and neutralize free acids in the alimentary canal.

Admagica is derived from a Greek noun signifying *a gland,* and a Greek verb signifying *to affect, to influence, to control, to conduct, to rule,* &c. Etymologically it signifies articles which influence the glands or the glandular system.

Definition.—Admagics are articles which exert a direct and specific operation upon the secernents and absorbents or glandular system, by which a greater or less change of action or condition is produced—a change manifested by a direct revolution of certain chronic, subacute and acute atonic phlogoses or inflammations; certain parabysmata and glandular enlargements; by the obviation of certain dysthetica; by the improvement of certain vitiated ulcers; by the relief or cure of certain cutaneous diseases; by the obviation of torpor and inactivity of all the secretions and excretions; and also by a diminution and improvement of the secretions and excretions when they are excessive and vitiated; the whole independent of any change in the degree of vital energies or strength of action in the sanguiferous system, and not caused by any evacuation which may happen to be produced.

Erethistica signifies *provoking, irritating, exciting,* &c.; but is not to be understood in its loose etymological sense, any more than narcotic.

Definition.—Erethistics are articles which produce a preternatural degree of activity and an augmented exertion of the powers and energies by which any function is discharged. A mere and pure erethistic agent may indeed be correctly compared to the whip and the spur, which do not give any new and additional power or energy, but only bring into greater activity that which already exists—which was not previously exerted to the same extent—and which was perhaps latent or prostrated in a greater or less degree. This is applicable only to mere and pure erethistics. It is not by any means true of antisbestics and tonics, as is so often alleged. The more active erethistics when pushed to a certain extent produce stupor or

numbness in some part of the system, attended with imperfection in the sense of feeling or a prickling sensation like that of a limb when it is said to be asleep, and with imperfect obedience of the muscles of voluntary motion to the influence of the will. The next grade of an erethistic operation is characterized by the occurrence of spasms or convulsions of different kinds, according to the article used.

ORŒSTHETICA is composed of a Greek verb signifying *to arouse, to stir up, to awaken, to excite,* &c., and a Greek attribute signifying *susceptible, sensible,* &c. Orœsthesis signifies the effects of an orœsthetic.

Definition.—Orœsthetics, when taken internally, act immediately upon the mucous membrane of the alimentary canal, and by textural sympathy upon all the other mucous membranes; in the *first* degree of their operation changing action or condition in all these membranes; on the one hand obviating torpor and insensibility; on the other hand obviating morbid irritability and sensibility; relieving laxity and spongy turgescence; increasing deficient secretions, diminishing excessive ones, and favorably changing vitiated ones, when connected with prostration and atony, and not with phlogistic diathesis; disposing aphthous affections and other ulcerations to heal, and augmenting healthy susceptibility; in the *second* grade of their operation occasioning a submorbid degree of irritability and sensibility; in the *third* stage of their operation kindling into action a phlogosis or inflammation of the erethematic sort; in the *fourth* stage of their operation occasioning ulceration and suppuration; in the *fifth* stage of their operation extinguishing vitality, i. e., producing gangrene.

NEURAGICA is derived from a Greek substantive signifying *a nerve,* and a Greek verb signifying *to affect, to influence, to control, to rule, to lead, to conduct,* &c.

Definition.—Neuragics are articles which, without either euphronic, narcotic, leäntic or antiphlogistic powers, operate primarily upon the nervous system; some of them, in the *first* degree of their operation, efficiently allaying, in a manner peculiar to themselves, morbid susceptibility and sensation and irritative action, without vertigo or general tremors; while others produce more or less vertigo and general tremors, but at the same time obviating, or contributing to obviate spastic or convulsive diathesis; *second,* they occasion more or less languor, lassitude and prostration, more or less neuralgic pain, more or less palpitation of the heart and arteries, more or less torpor as respects the peristaltic action of the intestines, more or less stupor or numbness in some parts of the extremities, sensations of constriction in the feet and hands, peculiar weakness in the lower extremities, many symptoms resembling chorea, morbid wakefulness, &c.; *third,* violent neuralgic pains in various parts of the body and limbs, great anxiety, general agitation, spastic or convulsive affections, obtuseness of the special senses or positive abolition

of them, dilatation of the pupils, emaciation, paralysis of the extremities, delirium, general exhaustion and sometimes death.

NAUSIATICA. *Definition.*—Nausiatics are articles that produce a distressing variety of common sensation called nausea, sea-sickness or sickness at stomach, having its seat in the stomach, always attended with a loathing of food and a tendency to vomiting, and always aggravated by motion or exertion. It is often produced by the motion of a ship in a high wind, by swinging, whirling, &c. It is often a precursor of vomiting; often a symptom of pregnancy, and occurs very frequently as a symptom of various diseases—gastritis, enteritis, diarrhœa, &c.

ERGASTICA is an ancient Greek term, having reference to *work, labor,* &c.

Definition.—Ergastics are processes or agencies which mechanically agitate and exercise the whole body in such a manner as to contribute to the restoration of health, under certain circumstances.

[To be continued.]

GLYCERIN.

BY W. J. M. GORDON, CINCINNATI.

WHEN I accepted this subject at the last meeting of the Association, I expected to have given to it more attention than my time during the past year would permit. Not having investigated it as thoroughly as desirable, I will present what I have accomplished in connection with much that is not new, so as to present it as fully as possible, and leave it for the experiments and suggestions of all who may be interested in it.

Glycerin, it is generally known, possesses a wonderful range of solvent properties, dissolving many substances not soluble in alcohol or water. Its agreeable taste, harmless action upon the system, and perfect assimilation with human digestion, specially adapt it when other substances would be rejected. Its sweetening property being almost equal to cane-sugar syrup, but differing from it in not being liable to fermentation; resembling oils, but, unlike oils, miscible with alcohol and water in any proportion; not volatile at ordinary temperatures, and not becoming hard at the freezing point of mercury. Possessing these properties, it cannot but be an article of importance both in pharmacy and in the arts.

The high price heretofore, no doubt, has kept it from many uses to which it is now applied. Recently glycerin, adapted to the various purposes to which it is extensively used, has been produced at a lower price than alcohol, sugar, or oil, which it has come in competition with, and which places it seems specially adapted to fill to a considerable extent; and the large amount and low price at which it can be produced, make it worthy of attention at a time particularly when every article of utility should be carefully looked after.

Medicinally, glycerin has been used for its nutritive and alterative effect, and in some cases with marked success, being admissible when cod liver oil and other unpleasant substances would be rejected. These, and its soothing effect in coughs, are the principal internal uses to which it has been applied alone. Its more important medicinal value is as a vehicle for the preparation of a great variety of remedies for both internal and external use.

It is a favorite article in combination with the hypophosphites—known as glycerole of hypophosphites; and never disagreeing with the most delicate stomach, as sugar is liable to do, is admissible when syrup is not.

Iodide of iron prepared with it in the place of syrup, makes a handsome and permanent preparation.

Its preservative and solvent property being so much greater than that of sugar syrup, cannot fail to recommend it in the place of that substance for the preparation of ipecac, senega, hive syrup, and such vegetable preparations as are liable to fermentation: specimens of several I now exhibit made with glycerin, costing $2.00 per gallon, which are elegant in appearance, and will undoubtedly remain without change an indefinite length of time.

Its uses externally are numerous. For chapped skin and rough and excoriated surfaces it has no equal; for sore nipples, skin diseases, ulcers of various kinds, to prevent excessive suppuration, and cleanse the secreting surface.

It is highly recommended in deep abscesses with diseased bone, combined with iodine, which it dissolves. With many it is a favorite mode of applying iodine and its salts.

It is used in cerates and ointments, which do not become rancid so soon when combined with it; as glycerole of lead, in place of Goulard's cerate, glycerin being used in the place of wax and oil; as glycerole of kino; which is said to be unchangeable; in the preparation of lactucarium in a liquid form, by which its activity and reliability are more certain; as glycerole of aloes, tar and arnica for external use. It is used with starch in the proportion of 1 oz. of glycerin to 70 grs. of starch for making an article called "plasma," as a substitute for lard or cerate. And it no doubt possesses advantage in preparing vegetable extracts, such as belladonna, aconite, and others for external use, as they can be readily mixed with it; for liniments, in the place of oil, as it will not become rancid: and has been suggested for the extraction of the active principles of vegetable substances in place of oil and fats, to be used in the preparation of cerates or ointments.

Incorporated with vegetable extracts, it will prevent mouldiness and keep them soft, and for pill masses liable to become hard it is a good addition. It may be used as an addition to poultices to keep them soft, or any article to be kept in a moist or plastic condition.

Its solvent and preservative properties are of great importance to

the pharmaceutist. In the preparation of fluid extracts it will be found to supply the place of alcohol and sugar to much advantage. My experience is such as to convince me that in most cases extracts will be more permanent by supplying the place of alcohol, used to preserve them, with glycerin. To fluid extract of jalap, veratrum viride, cinchona aromat. and iris versicolor, glycerin was added and all the alcohol evaporated out, specimens of which I now exhibit, presenting a handsome appearance. Sarsaparilla and those liable to fermentation will be much better preserved with it.

I have used glycerin as a menstruum in the preparation of extracts of cloves, nutmegs, and Ceylon cinnamon, and the preparations are elegant representatives of the substances from which they were made.

It dissolves the vegetable acids, most of the vegetable alkaloids, sulphuret of potassium, permanganate of potassa, sulphate of copper, zinc, iron, and potassa, alkaline and some of the metallic chlorides;

Iodide of ammonium, cadmium, zinc, potassium, sodium, lime and manganese;

Freshly precipitated carbonate of iron;

Most of the metallic oxides to some extent;

Nitrate of potassa, silver, copper, and lead;

Citrate of iron, citrate of iron and quinine, citrate of iron and strychnia, tartrate of iron and potassa;

Pyrophosphate of iron, and most saline substances.

Heating to give it greater fluidity will generally increase its solvent property.

It may not be amiss to name other purposes for which glycerin is largely used. Much the largest quantity used for any one purpose, except that for filling gas metres, is in the manufacture of hair oils, tonics, and washes, for which it is admirably fitted, taking the place of alcohol and castor oil, which are now too expensive for the purpose, and by its undrying property keeping the hair moist in appearance.

It is largely used in tobacco, and is particularly adapted to the article known as fine-cut, preserving it in a moist state an indefinite length of time; and, unlike sugar, molasses, and infusion of liquorice, which have been used for the same purpose, it will not turn sour, and is unchanged by exposure to the air.

Wine and liquor manufacturers use it to improve liquors, by giving body and removing the fiery taste.

It is used by manufacturers of woollen goods in place of oil, being more economical and not requiring soap to wash it out.

Manufacturers of cotton goods use it in size to prevent rapid drying.

Printers use it in place of molasses to make rollers, which will not dry and shrink.

It is used by artists in clay and plaster of Paris to preserve it in a plastic form for modelling.

It is used in soaps.

For filling wet metres, used in measuring illuminating gas, it is now extensively used, and possesses decided advantage over whiskey or any substance before used for the purpose. It is practically free from any objection, not evaporating at any ordinary temperature, and can be sufficiently diluted to prevent its absorption of more water from the gas, and not liable to freeze at any degree cold metres are subject to, and rendering them free from the attention necessary if filled with whiskey or water.

It deserves attention as a lubricator for fine machinery, not congealing or being affected by exposure to the atmosphere.

Numerous other applications have been made of it, and its uses will increase as its wonderful properties become known.—*American Druggists' Circular*, from *Proc. of Am. Pharm. Assoc.*, 1864.

Bibliographical Notices.

Glaucoma; its Symptoms, Diagnosis and Treatment. By Peter Dirck Keyser, M.D. Philadelphia: Lindsay and Blakiston. 1864.

This is a little pamphlet of 88 pages, neatly printed on yellow tinted paper, rendering a book always so pleasant to read, especially at night by artificial light. Don't the book publishers generally know of this fact yet?

The author says, in his preface, "I have chiefly followed the views of Prof. A. von Graefe, of Berlin, in the diagnosis and treatment of this disease; indeed, we are mainly indebted to his admirable and important researches for the elucidation and treatment of this and many other diseases of the eye."

"The substance of this work is from my notes taken while attending the clinical lectures of Prof. Von Graefe, during the winter of 1863 and 1864, in Berlin, and I have compiled and published them, thinking that they would not only be of interest, but of advantage to the medical profession in this country."

Now we recommend this pamphlet to every surgeon and general practitioner, but we must more highly recommend "J. Soelberg Wells's Four Lectures on Glaucoma and Iridectomy," delivered at the Middlesex Hospital, published in London, April, 1864, from which Peter Dirck Keyser, M.D., *has copied his pamphlet word for word, and not only not added anything, but left out some important portions and all the plates in explanation of the operation of iridectomy, &c.* Had the *editor*, not *author*, simply republished Mr. Wells's book without credit, that would have been bad enough, but to boldly state that the pamphlet is "his notes of Graefe's lectures," is rather too severe. This barefaced plagiarism seems to have escaped the notice of our cotemporaries, judging from the very favorable notices of this pamphlet which we have seen in some of them, in which no allusion is made to it.

We therefore call the attention of our professional brethren to this high-handed procedure, and take the liberty in their name of apologizing to Mr. Wells for this insult to himself. We are not informed with regard to the professional status which Peter Dirck Keyser has hitherto held, nor of his place of residence. If he has any legitimate connection with the medical profession, this infamous act calls for immediate action from his associates. J.

The Principles and Practice of Ophthalmic Medicine and Surgery. By T. Wharton Jones, F.R.S. Third and revised American Edition, with additions, from the Second London Edition. Philadelphia: Blanchard & Lea.

The few editorial notes added render this very little better than the second edition, published in 1857. It does *not* "bring the work up to the present state of knowledge in the important department of medicine and surgery of which it treats." There was a great opportunity to do this, for the English, French and German literature has been very abundant upon the important advances of ophthalmology. We do not think, therefore, that there was any excuse for slurring over such subjects as the Ophthalmoscope and its various forms, Accommodation and Refraction of the Eye, Glaucoma and Iridectomy, Strabismus and its connection with the refractive State of the Eye. The test types do *not* correspond to Prof. Jäger's (p. 61). The plates, as we of course must expect, are worn out, and not to be compared with those of the English edition. The ophthalmoscopic plates are eminently bad. There are certainly plenty of moderately good ones that might have been copied.

Now for want of a better, this book is the one given to each U. S. hospital for the surgeons to keep themselves posted in ophthalmic medicine and surgery. It really seems a pity that such an opportunity could not have been seized to acquaint the profession so largely employed under the Government with the truly very great advance in ophthalmic scientific research. The time must come when the surgeons, at least of the regular army, will be *forced* to make themselves familiar with the ophthalmoscope and the anomalies of refraction and accommodation, as these subjects bear so immediately upon the "examination of recruits" and "malingering." Unfortunately, they will not be able to do so from this edition of Mr. Jones's work. Had only these two topics been properly treated in the editorial additions, we should have hailed this edition with much more pleasure. J.

In the Pennsylvania Hospital for the Insane, at the date of the report of the Physician, 1863, there were 285 patients, since which 183 have been admitted and 189 have been discharged or died, leaving 279 under care at the close of the year. The total number of patients in the hospital during the year was 468. The highest number at any one time was 306; the lowest was 270; and the average number under treatment during the whole period was 286. Of the patients discharged during the year 1864, were—cured, 84; much improved, 15; improved, 43; stationary, 30; died, 17.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: WEDNESDAY, APRIL 19, 1865.

The Nation's Mourning.

In this dark hour of our nation's great calamity and grief, when the appalling deed of crime weighs like a nightmare upon every breast, we could not, even if we would, address our readers on any other topic than that which is the foremost in all our hearts. We live in a time of extraordinary events and unlooked-for catastrophes. The unbounded and inexpressible exultation of one day gives place to the immeasurable sorrow of the next. The joyous emotions which thrilled the nation but one short week since to the most extravagant demonstrations at the seemingly near prospect of peace, are changed into the unutterable horror of to-day. Truly it is time for man to feel his own weakness and blindness, and to stand confounded and dumb before the inscrutable decrees of the Majesty of Heaven.

To-day is the day appointed for the funeral obsequies over the remains of our late beloved President, and the universal badges of mourning, and more the signs of personal grief on every countenance, show how all-pervading and sincere is the sorrow which has bowed down this nation as no other nation was ever stricken before. Who can tell the issue of these solemn events? Where is the prophet who can foresee the consequences upon this whole nation, to which this awful crime, which has pierced its very heart, may lead? The whole experience of the past four years has been filled with occasions to remind us how utterly futile were our attempts to penetrate the future, to impress upon us the sense of the ever-present and over-ruling power of the Most High; but no lesson which this nation has before received has brought home this vital truth to every heart with such irresistible power as that which crushes us now.

It would be out of place for us to attempt to discuss here the agencies which may have been concerned in planning and executing the dastardly act which deprives this nation in an instant of one whom each added day of his presidential service only made the dearer to the thousands who admired and revered him. With what heartfelt satisfaction have we beheld him winning over to his side from day to day many who in times past distrusted or opposed him, until now, in the fearful hour of his atrocious assassination, spontaneous and heartfelt tributes of real confidence and affection are heard almost without a dissenting voice throughout the land! There is much to comfort and sustain our nation under the pressure of this dire calamity in the thought that, in spite of so much opposing prejudice, and with so few of those external graces of person and manner which have such an immense influence when bestowed upon the head of a nation, the simple, honest worth, and purity of purpose and principle of our late Chief Magistrate have won for him a place in the hearts of our people second to none ever held by any earthly leader. It shows that notwithstanding our many iniquities and shortcomings we are

still at the very centre loyal to the highest and truest greatness. God grant that we may come out of this fiery trial through which his inscrutable Providence is leading us, to a new, stronger, and more noble life, fitting us for a leading place as a great, Christian nation!

Sudden Death in Labor.—We have received from Dr. M. W. Case, of Chicago, the following interesting account of sudden death in labor; the particulars were furnished to him by the husband of the unfortunate lady, a clergyman and friend of his. This gentleman in a letter to Dr. Case, speaking of his wife, says:—

"She had been uncommonly well for one in her situation up to the very day of her death. She helped about the house the day before, and got up as usual that morning, but thought she had better lie down again, as there were symptoms of approaching labor. The family physician was called in to see her, and he thought she would probably be sick soon. She had slight pains during the day, which in the evening grew more frequent and severe, but there was not a single bad symptom. We all thought she was doing well, and she was hopeful.

"Between 9 and 10, P.M., I was sitting by her side, when she was taken with a hard pain, and suddenly something seemed to give way, with a sound. She exclaimed, 'what was that? I never was so before.' I spoke to the doctor, who came to the bedside and said that all was right, 'there is nothing amiss.' She exclaimed, 'it seems as if my head would fly off my shoulders,' and immediately had a severe spasm; her face became almost black, and in a moment, without another word or groan or struggle, she was gone. We applied ammonia, put her feet in hot water, and the doctor tried to open a vein, but all to no purpose—she had gone, life was extinct. It seemed to us like putting an extinguisher on a candle. None of us had ever witnessed the like, the doctor had never seen such a case, and we were wholly unprepared for such an issue." Dr. Case adds:—

"This is probably one of those cases in which no human skill could have been of any avail; but such accidents have a lesson for all whose duties call them to the lying-in room. Will the Editors of the Journal please give an opinion as to the probable cause of the sudden death of Mrs. S.?"

It does not seem difficult to us to frame a plausible theory of the cause of death in the distressing case above narrated. It does not appear that there was any necessary, or at least direct connection between the "sound" mentioned and the cerebral symptoms which proved so suddenly fatal.

That death was caused by apoplexy would hardly seem to admit of a doubt. The severe convulsion, the immediate loss of consciousness, the congestion of the vessels of the face, all point to a sudden and overwhelming overflow of the central seat of sensation and life. What was the strange sound just preceding these symptoms?

This sound, it appears, was coincident with a severe pain. "Suddenly something seemed to give way." The lady, in alarm, asked what it was, and said she had never had such an experience before. It is not stated how many labors the patient had gone through previously, but our informant speaks of having attended her two years

before in a natural labor, the child of which was still living and healthy. To our minds it seems probable that the sound in question was caused by the rupture of the membranes and the sudden escape of the liquor amnii. Every accoucheur is familiar with the rushing noise which a large amount of this liquid produces when the membranes, perhaps unusually strong, suddenly give way under the pressure of a violent pain. It is also an occurrence very likely to startle the patient when experienced for the first time. Such an abrupt, rushing escape of the waters is not very common in obstetric practice, because physicians generally break the membranes as soon as the mouth of the womb is properly dilated, and the liquid comes away more gradually. In the present instance it may very well have been the case that in the first labor this was done by the attending physician, and the lady consequently had not the same experience ; or the quantity of *liquor amnii* may have been much less. In the second labor the patient was under the charge of another physician, who may not have aided the labor by rupturing the membranes. The sound was coincident with a severe pain—such a pain as brings into action all the expulsive power of the patient. The breath is suspended, every muscle is brought into extreme tension, the return of the blood from the brain is almost stopped by the fearful concentration of power to force the child into the world ; the eyes are suffused, the whole face is turgid with blood ; and we think we speak to the experience of every physician who has witnessed such a scene, when we say, that it seems at such times only wonderful that the vessels of the brain are ever able to bear such a strain. We know that we have often begged patients to desist, if possible, from such terrible efforts at expulsion, for fear of this very accident.

With the few facts then, given us above, it seems highly probable, that the death of this estimable lady was occasioned by apoplexy, caused by the violent expulsive efforts of a powerful pain accompanied by the sudden escape, with an audible sound, of a large quantity of liquor amnii. We should be glad to receive any expressions of opinion from our readers on this interesting case.

At the regular weekly meeting of the Chicago Medical Society, March 11th, 1865, Dr. Hildreth, Surgeon to the Desmarres Hospital in this city, for the treatment of soldiers affected with diseases of the eye and ear, presented to the Society a soldier, about 20 years of age, with a striking want of development in his external auditory apparatus. Both external ears were very small and imperfect in their formation, and the external auditory canals or meatus were entirely *absent*, both in the soft parts and the temporal bone. Yet the individual could hear ordinary conversation without difficulty. The defect was congenital. During the discussion to which this case gave rise, Dr. Hildreth mentioned the case of a soldier who had become deaf, from supposed anchylosis of the small bones of the ear, but whose hearing was restored by a severe concussion ; and Dr. Davis alluded to a case, which had been reported to him about two years since, of congenital deafness—the individual having been educated as a deaf mute ; but in whom hearing was restored during the progress of an attack of se-

vere *variola*, occurring after the patient had attained the age of 45 years.—*Chicago Medical Examiner.*

Mortality in the French Army.—Statistical tables are now annually published of the above mortality. The figures for 1862 stand as follows:—The whole army numbered 372,166 men; of these, 13,393 were stationed in Italy, 54,040 in Algeria, and 304,733 within the French limits. It is a pity that the regiments employed in Mexico and in the colonies are not included in the tables. The mortality in 1862 was 10·1 per thousand soldiers; the proportions as to localities being, for the home army, 0·0094; for Algeria, 0·0122; and for Italy, 0·0177. These results are certainly cheering, as Benoiston's tables show, from 1820 to 1830, a mortality for the home forces of 20 per thousand; and it was no less than 19 per thousand so late as 1846. It is remarkable that the men quartered in the Papal States lost 237 individuals, whilst the same number in France lost only 126.—*Lancet.*

There were fifteen graduates at the late commencement of the Philadelphia Dental College.

The annual commencement of the Philadelphia College of Pharmacy took place recently, and the degree of Graduate in Pharmacy was conferred on twenty-nine gentlemen—all Pennsylvanians, it is stated.

At the sixth annual commencement of the Chicago Medical College (Medical Department of Lake Forest University) the degree of M.D. was conferred on twenty-six graduates—Prof. N. S. Davis acting as President of the Faculty. The ad eundem degree was also conferred on four candidates, and the honorary degree on one.

From the Annual Report of the Superintendent of the Wisconsin State Hospital for the Insane we learn that:—The number of patients remaining Sept. 30, 1863, was 188; there have been admitted during the year, 112; making the number enjoying the benefits of the hospital, 300. There have been discharged, 130. Of those discharged there have recovered, 56; improved, 21; not improved, 36; died, 17.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, April 15th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	43	29	72
Ave. mortality of corresponding weeks for ten years, 1853—1863,	36.8	37.1	73.9
Average corrected to increased population - - - - -	00	00	80.85
Death of persons above 90 - - - - - - - -	1	0	1

Died,—At Newbern, N. C., Dr. Dixi Crosby Hoyt.

Deaths in Boston for the week ending Saturday noon, April 15th, 72. Males, 43—Females, 29. Accident, 1—inflammation of the bowels, 1—congestion of the brain, 1—disease of the brain, 4—inflammation of the brain, 1—cancer, 2—consumption, 17—convulsions, 5—diabetes, 1—dropsy, 1—dropsy of the brain, 3—drowned, 1—dysentery, 1—fever, 1—scarlet fever, 1—typhoid fever, 1—gastritis, 1—disease of the heart, 1—infantile disease, 2—disease of the kidneys, 1—congestion of the lungs, 1—inflammation of the lungs, 3—old age, 3—paralysis, 1—premature birth, 2—smallpox, 6—suicide, 1—teething, 1—tumor, 1—unknown, 5—whooping cough, 1.

Under 5 years of age, 31—between 5 and 20 years, 8—between 20 and 40 years, 20—between 40 and 60 years, 9—above 60 years, 4. Born in the United States, 50—Ireland, 17—other places, 5.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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CASE OF POISONING BY VERATRUM VIRIDE.

[Read before the Middlesex East District Medical Society, and communicated, by the Secretary, for the Boston Medical and Surgical Journal.]

By J. C. Harris, M.D., of West Cambridge.

J. C., aged 1 year and 6 months, was attacked with pneumonia, from which he made a good recovery, the chief remedy in the active stage being veratrum viride—the dose being four drops of the tincture, repeated every four hours. When the child ceased taking the veratrum, there remained forty or fifty drops mixed with water, in the proportion of four drops to a teaspoonful, which the mother saved for future use, keeping it in a cup four or five days, then pouring it into a bottle. About six weeks after this, the child caught cold, was feverish, and had some difficulty in breathing. The mother commenced giving the veratrum every half hour, in teaspoonful doses of the mixture she had saved, until four or five doses had been given; a tablespoonful was given for one dose by mistake. The whole quantity taken was probably not less than thirty-five drops, for the four or five days' evaporation must have increased the proportionate strength of a dose at least one drop.

There was an effort to vomit after the second dose, but without ejecting anything from the stomach. Efforts to vomit were made every few minutes, but without success, except once, when a small quantity passed from the mouth. I was called to the child about seven hours after taking the first dose. I found him apparently unconscious, very pale, breathing heavy—almost stertorous; pulse 40, extremities cold, and a profuse cold perspiration over the whole body. These symptoms I supposed were the result of the large doses of the veratrum. I made no attempt to remove the contents of the stomach, but ordered mustard paste to be applied to the chest, abdomen and extremities, and carbonate of ammonia and camphor—three grains of the former to one of the latter—every hour, and a drachm of brandy intermediately. This treatment was

kept up until the child died, about thirteen hours after taking the first dose of the veratrum.

Remarks.—This child had always been feeble, and his mother was in the habit of frequently dosing him for real or imaginary sickness. It is possible, if not probable, that the result would have been different had there been free emesis within an hour or two after taking the medicine. I did not attempt to remove the contents of the stomach, for the case seemed almost hopeless when I first saw it.

This is the first case of death from an overdose of veratrum viride I have seen or heard of, and therefore it is possible I did not pursue the best course of treatment.

Note by the Secretary.—This case is very interesting, from the fact that it is the first well-authenticated case of poisoning from the use of the veratrum viride. It did not result from its legitimate employment under the direction of a physician.

Another point of interest is the fact that the alkaloids suspended in water should keep their strength for six weeks. Those who are familiar with the action of the tinctura veratri viridis with water know that on keeping a few days, a dirty, unpleasant-looking sediment is deposited in the bottom of the vessel, which has usually led to its rejection as worthless.

Still another point is the absence of free vomiting. Perhaps the nature of the drug might have been so changed as to have impaired the emetic without destroying the sedative properties.

The relation of this case should not hinder any from administering the veratrum when it is indicated. It must have been given tens of thousands of times, but this is the first well-authenticated case of death that has come to the knowledge of the Veratrum Viride Committee of this Society. The veratrum viride is used at present by the members of this Society, and the confidence in it has grown with its use as the most reliable arterial sedative known to us.

Woburn, March 24th, 1865.

MEDICAL TESTIMONY.

[Communicated for the Boston Medical and Surgical Journal.]

Messrs. Editors.—Truth is the great end of all investigation. The cause of truth requires the most critical examination and careful discrimination. Errors and mistakes in the observation of facts, and in opinions based upon them, may have been unavoidable for want of attention or haste, but they are unjustifiable in all matters of medical jurisprudence, especially when committed by that class of witnesses called experts—a class who are, at least by the laws of Maine, favored by unlimited reward; and who are expected to possess talents and attainments far beyond those of ordinary skill and knowledge.

In cases of strangulation, where the question whether homicidal or suicidal arises, it seems unfortunate that the cause of truth should require anything more than sound common sense and accurate representation. But such is the sympathy of friends and of the community in behalf of the accused, and such are the technical and legal guards thrown around the alleged criminal, that fair and candid investigation does not satisfy. Something more must be said and done. Extraordinary facts and opinions, supported by extraordinary science, must be resorted to in order to color a circumstance or sharpen a point on which to hang a doubt. With these preliminary remarks, I desire to call the attention of medical witnesses to the following case:—

A woman was found dead in bed. Her face was suffused with blood. Her eyes protruded from their sockets. Her tongue was thrust out of her mouth, from which issued bloody saliva. On her neck were several oval, dark-reddish spots. They were found in front, just over and above the larynx; and also about an inch and a half from the mesian line each side of the larynx. There were three of these spots on the right side and two on the left. At least two small, crescent-shaped marks accompanied the spots on the right side. These spots produced some abrasion of the cuticle, and were all rather oval in shape and of the size of a ten-cent piece. A *post-mortem* examination found the lungs engorged with black fluid blood. The right side of the heart was full of blood of this color and consistence. The left side was nearly empty.

Around the neck of the deceased was found a silk scarf—a yard or more long, an inch or an inch and a half wide—such an one as was worn upon the neck of a man two years ago. This scarf was found on the neck as follows:—The middle of the scarf was placed in front of the larynx—then the end on the right side was carried around behind the neck to the left side in front, while that on the left side was carried in the opposite direction, till both ends met in front, and were, without any knot, grasped near their extreme ends by the left hand of deceased—*the hand being about ten inches from the front of the neck.* It was not drawn tight about the neck. There was no circular mark or abrasion of the cuticle on the neck in the track of the scarf to show that it had at any time been drawn tight about the neck.

At the trial, in the Supreme Court, the question arose—Was this suicidal or homicidal strangulation? In answering a question like this, on the part of a medical witness—be he expert or not—there ought, it seems to me, to be no difficulty in reconciling the facts and opinions of those of one side with those of the other. Science should have no incompatible and conflicting opinions where the incompatibility rests upon identical facts.

The greater number of medical witnesses in this case gave it as their opinion that this strangulation was homicidal. 1. Because it

is impossible for any person to strangle himself with his own hand voluntarily applied. 2. It could not have been done by the scarf in the manner this was applied. 3. It was not done with the scarf as it was applied, either by the deceased or another. 4. The marks and spots on the neck were, most probably, made by another, and not by the deceased, and were produced by the application of the fingers to the throat.

On the contrary, it was testified by an expert, after referring to the fact that suicide is often committed without any particular motive before hand, "that this scarf, put on as this is said to have been, might be constricted so as to cause death. There is no insuperable difficulty. In such case the *contraction* might be continued through the death struggle and *perpetuated* in the dead body."

The testimony here presented is totally incompatible and utterly irreconcilable. On the one side, it is stated that the strangulation could not have been produced by the hand of the deceased, or by the scarf as applied to the neck, with the appearances connected therewith. On the other hand, it is stated, with equal force and confidence, that the deceased could have committed strangulation upon herself with the scarf as here applied, with all the attending circumstances; and that she could have produced so much constriction as to cause death, without any insuperable difficulty.

It becomes a matter of grave importance which was right—which opinion subserves the cause of truth. Who will credit medical testimony if, on a question of science, it is so utterly irreconcilable?

I venture the assertion that a person cannot commit suicide by applying a scarf to the neck, in the manner this was said to have been, so as to cause death by his voluntary efforts. It is an impossibility. And I would assert further, that with all the attending circumstances, it is most extraordinary that a medical witness could express such an opinion. MEDICUS.

[We fully agree in opinion with the writer of the above communication.—EDS.]

REVIEW OF DR. TULLY'S SYNOPSIS OR CLASSIFICATION.

[Continued from page 240.]

WITH regard to the genuineness of the first twelve of these classes, as has been already said, there is scarcely room for disagreement. All writers on pharmacology, whatever arrangement they adopt, and those who profess to have no arrangement, are obliged to made constant use of them. We can neither write nor talk intelligibly upon the subject without doing so. They are not all of equal importance, of course, yet each one of them must be regarded as indispensable. There is no intelligent practitioner, whatever he may say in depre-

cation of the use of drugs, or to induce us to discard all but half a dozen, who would not consider his hands tied and his usefulness curtailed to an important extent, if deprived of either of the twelve powers on which the first twelve of these classes are founded. But in regard to the six new ones there may be more room for doubt; hence it is necessary to say a few words about each of them.

1st. *Adenagics.*—An adenagic power has been partially and indistinctly recognized, yet no one has directed particular attention to it. It has never been defined, and consequently has never, in modern times at least, been made the foundation of a class. That a variety of opinions have been entertained in regard to it, may be inferred from the diversity of names that have been applied to it. It has been called deobstruent, alterative, liquefacient, attenuent, detergent, aperient, resolvent, anti-syphilitic, anti-cachectic, and by as many others that might be mentioned; and with ideas of their operation suggestive of one or another of these names certain articles are prescribed almost daily and by all physicians. If Dr. Tully's definition is accepted, and we see not how it can be otherwise, it will be seen to be one of the most important powers in the materia medica, and one that must be often called for in practice.

The fact that most of the effects specified in the definition sometimes take place indirectly from the use of articles that belong to some other class, and that possess no adenagic power, does not disprove the distinctness of an adenagic power, nor obviate the necessity of a class founded upon it. This only shows the importance of the word directly at the commencement of the definition, for that there are articles that act directly in this way, and independent of any other operation, will not be disputed. Indeed, this is the only power for which several important articles are ever prescribed. Most of the preparations of mercury possess it in a high degree, and are seldom used for any other; or if they have any preference over other articles for their emetic or cathartic operation, this preference is due to the adenagic power they exert in connection with their emetic or cathartic power. Its sialagogue effects are but a part of its adenagic operation; as are doubtless its occasional emmenagogue, expectorant, diuretic and diaphoretic effects. In short, if deprived of its peculiar operation upon the secernents and absorbents, or glandular system, mercury in all its forms might be dispensed with and probably would be. This is the only power for which sulphur and iodine are ever prescribed; it is the only power of leontodon taraxacum, and the most important one of conium maculatum. Colchicum autumnale exerts no other that is of any value; and there are other articles that are occasionally prescribed for some other power, but which are chiefly valuable for their operation upon the secernents and absorbents or glandular system.

It has always been difficult to find a place for these articles in any classification heretofore proposed, and false notions have been

propagated by their false reference, or by their being classed with others with which they have little or no affinity. Colchicum, for instance, has been classed with both the cathartics and diuretics, because it happens to possess these in addition to its adenagic power; and yet it can never be a convenient or available article for its diuretic or cathartic operation; and thus it has happened that some of the more important articles of this class, and some of the most important in the materia medica, have been scattered about in different classes by systematists according to their subordinate and often useless powers, which they happen to possess in addition to their adenagic power; their classification having no reference and giving no clue to their most prominent and useful operation, and the only one for which they are ever prescribed.

This power is distinct from all others, and has all the essential characteristics of those the genuineness of which is admitted. The class founded upon it is a large one, and the articles belonging to it, as is the case with all the other classes, differ among themselves, not only as respects the quality of their adenagic power, but as to the parts or organs upon which it is more especially manifested; and also as to the specific character of the diseases to which they are more especially adapted. They differ also as respects the other powers with which their adenagic power may be associated. As with the articles of all the other classes, therefore, there is occasion for the exercise of much knowledge and judgment in their administration. Hence the importance of their being brought together, compared with each other, classified and arranged, and made a distinct subject of investigation.

2d. *Erethistics.*—There is a set of articles, most of which have come into use in modern times, and have been classed with the narcotics; though they have been treated of separately by various writers, and are now very generally considered as in some way distinct from other articles belonging to this class, and by way of distinction have been called acrid narcotics. This compound term is inappropriate, for the reasons, first, that many of the articles, and some of the most prominent among them, as strychnos nux-vomica and squatea amara, have no acrid properties, but have been associated with others that have, as aconite, arnica, &c., because they are found to agree with them in their general operative effects; and second, because the effects of none of them have the slightest resemblance to those of the true and proper narcotics, except that they are wholly manifested upon the brain and nervous system. They can in no case be used as substitutes for the narcotics; Turnbull, himself, who gave them this name, says that "no narcotic effects have been observed to arise from their use." The term narcotic, therefore, is as inappropriate as the term acrid, and is more objectionable because more likely to mislead.

There are a large number of articles whose effects are principally

manifested upon the brain and nervous system, yet differing so much in kind that they have long since been divided into two classes—narcotics and nervines. The latter are sometimes called antispasmodics, but Dr. Tully calls them euphrenics. Now the operation of these acrid narcotics, as they are called, is no more like that of the true and proper narcotics—opium, datura, hyoscyamus, &c.—than it is like the true and proper euphrenics—chloroform, valerian, musk, amanita muscaria, &c. It is no more like one or the other of these, than these are like each other. It is distinct from both, and there are precisely the same reasons for making three that there were for making two classes of them.

The effects of this third power, when carried to a certain extent, may be appropriately expressed by the word erethism, and the class founded upon it may therefore be called erethistica or erethistics, which, as already explained, signifies *to provoke, to irritate, to arouse*, &c. For the purpose of diagnosis, as well as to show more clearly that there is a necessity for this class, and that it has a true foundation, it may be well to bring together and compare these three powers—the narcotic, the erethistic and the euphrenic—each of which acts wholly upon the brain and nervous system, and in such a manner that the classes founded upon them would stand together and constitute a natural group in an arrangement of the classes among themselves. Most that will be needed, however, will be to quote from their definitions; and we will first compare the primary grades of their operation, and afterwards their secondary or ultimate effects.

The *narcotics first* allay irritability and irritation, restlessness, jactitation and watchfulness; *second*, they allay pain; and, *third*, they produce more or less somnolency, or even positive sleep.*

The *erethistics*, in the first degree of their operation, produce a preternatural degree of activity and an augmented exertion of the powers and energies by which any function is discharged. They give no new or additional power or energy, differing in this respect from the antisbestics *(stimulants)*, but only bring into greater activity that which already exists, and which was perhaps latent or prostrated to a greater or less degree.†

The *euphrenics first* obviate languor and lassitude where they exist; *second*, produce a peculiar calm, placid and pleasant state or condition; *third*, preternatural wakefulness; and *fourth*, more or less

* These are essential though only subordinate parts of a narcotic operation. Neither an antirritant, anodyne or soporific effect can be regarded as fundamental; as to found a class upon either of them would be useless if it were practicable. To call an article that exerts neither of them a narcotic would be a misnomer.

† The most striking manifestations of this power have been witnessed from the use of nux vomica and aconite in certain paralytic affections, in which the narcotics are supposed, at least, to produce no effect that is beneficial. The erethistics produce, instead of allaying irritation. They are neither antirritant nor soporific, at least in the sense in which the narcotics are, nor are they anodyne in any sense.

positive exhilaration, in which the actions of the subject are not under the control of his will, and perhaps amount to actual delirium.

In the primary grades of these effects, therefore, the distinction between these three powers or classes is sufficiently obvious; but in their secondary or ultimate effects it is still more prominent and even striking.

Coma is the most prominent and uniform symptom of *ultimate narcosis;* whereas,

Stupor, or numbness attended with a prickling sensation or formication, as it is called—a sensation like that of a limb when it is said to be asleep—commencing usually in the lower extremities and extending to other parts of the body, often attended with imperfect obedience of the muscles of voluntary motion to the influence of the will, without coma, is *ultimate erethism.*

Anæsthesia, or a state of insensibility to pain, as produced by chloroform, the fifth grade of a euphrenic operation, which immediately succeeds the high degree of exhilaration, is *ultimate euphrasy.*

Several of the more potent articles belonging to each of these classes are capable of destroying life, and hence are called poisons; but they differ in their poisonous effects, or in the manner in which they destroy life. But as the articles of each class differ so much among themselves, it would be difficult to describe how each class differs from the others in these respects.

As the euphrenics, having long been considered a distinct class, are now easily distinguished from the narcotics, so the erethistics, when they are as well understood, will be as readily distinguished from both the narcotics and the euphrenics.

In their therapeutic applications the narcotics and erethistics differ as widely as in their operative effects. Those who have directed particular attention to the latter, as a distinct set of articles, and given them the name of acrid narcotics, do not recommend them for any of the purposes for which the true and proper narcotics are given. On the contrary, the benefits attributed to them are said to be "unattended with any narcotic influence."

These must be considered as sufficient reasons for regarding an erethistic power as distinct, and arranging the articles in a distinct class.

3d. *Oresthetics.*—This single power has been made the foundation of three distinct classes—viz., the rubefacients, epispastics and escharotics; all dependent upon its external topical application, differing only as to the degree in which it is exerted, and without reference to its internal, which is by far its most important use. Several of the articles, to be sure, are given internally, but then they are transferred to the class stimulants, and to distinguish them from others of this class are called acrid stimulants. But very few of them, however, exert any true stimulant, or what Dr. Tully calls antisbes-

tic power; and then only in so slight a degree that they can never be relied upon when antisbestics are urgently called for. It is their acrid, or what Dr. Tully calls their oresthetic power—their power to arouse susceptibility, remove torpor, increase sensibility when it is deficient and lessen it when it is in excess, and thus, independently of any stimulant or antisbestic power they may exert, change morbid to healthy action, which is most important. When given internally, their impression is made primarily upon the mucous membranes to which they are immediately applied; and, secondarily, by textural sympathy upon those of remote organs. When applied externally, their operation is the same, modified only by the difference in the structure and functions of the skin and mucous membranes.

This power, or its internal use especially, has not been duly appreciated. Dr. Tully was the first to define it clearly and direct attention to it as a fundamental power. As to the genuineness of the class and its great importance, there can be no question. The articles belonging to it are numerous, and the principles to guide us in their therapeutic application have no where been embodied except in Dr. Tully's proëm to this class.

4th. *Neuragics.*—The deleterious or poisonous effects of lead upon the human system are well known. Arsenic exerts the same power, and with more intensity. It is by this, probably, that it destroys life. Carbonate of lead, if taken freely, would doubtless prove fatal with as much certainty as arsenic, though not as speedily. There are a variety of articles, mostly from the mineral kingdom, that exert the same power, though not many of them to such an extent as to have placed them in the category of poisons. But it may not be so generally understood that this same power, like most others that are considered poisonous, may be turned to good account in medicine. Certain kinds of irritation, erethism, spasms or convulsive actions are amenable to this class of articles that are not at all or but slightly so to opium or any of the ordinary antirritants or antispasmodics. A writer who calls them mineral sedatives, and who seems to be as familiar with them as was Dr. Tully, speaks of them as follows: "They are better defined by their morbific, or what may be called their poisonous operation, than by their medicinal or curative effects; and yet these last are obvious enough in practice. We see them in the relief of morbid sensibility and irritability, the abatement of unnatural frequency and irritation of the pulse, the control of restlessness and pain of the neuralgic sort, and the counteraction of the spasmodic diathesis generally; we see them when acetate of lead removes the erethism which attends hæmorrhagic cases, or cures irritable or spasmodic cough; when nitrate of bismuth or prepared chalk, or even tartar emetic in large doses, allays vomiting; when calomel, in drachm doses, controls diarrhœa; when nitrate of silver, oxide of zinc, or ammoniated copper, overcomes epilepsy and other spasmodic diseases. In all these cases sedation

of some sort is the prominent medicinal operation. But the toxicological or morbific effects of the remedies of this class are more palpable and more easily described. These are never sought in prescription, but result from non-medicinal doses and uses."

The effects of acetate of lead in arresting hæmorrhage may be attributable as much to its neuragic as to its styptic or astringent power in many cases; and when this power is better understood and more generally recognized as belonging to calomel, this may help us to reconcile some of the conflicting statements in regard to this article, and at the same time give us more precise and rational views of its general therapeutic application.

The writer just quoted says:—"If Dr. Tully had done nothing more for scientific medicine than to write his proëm to the class neuragica, containing forty-five pages, he should take rank with the foremost medical authors of his day. By unwearied industry and great analytic power, he has separated from their combinations a class of facts hitherto overlooked or imperfectly understood, pointed out their characteristics, shown their great importance, and given them a place in classification."

5th. *Nauseatics.*—The first question that suggests itself is, whether a nauseatic is distinct from an emetic power. It should be borne in mind that while nausea is a sensation merely, vomiting is an action or motion; that nausea, being one of the numerous varieties of common sensation, must have its seat in nerves of sensation, derived from the two posterior columns of the spinal cord; while retching and vomiting are involuntary motions, and as such must have their seat in the involuntary motor nerves of expression, derived from the medullary or nervous tract, situated between the two posterior and the two anterior columns of the medulla oblongata and upper part of the spinal cord. These nerves are next to the stomach and œsophagus, while we have no evidence of their being sent to any part of the alimentary canal below the stomach. Nausea and vomiting, therefore, depend not only upon distinct nerves, but upon distinct systems of nerves, not necessarily associated in their functions, but capable of association under certain circumstances. Hence they take place independent of each other, and we may have nausea without vomiting, and sometimes vomiting without nausea. It would be a great mistake to suppose that nausea is only an incipient or an imperfect grade of vomiting. Moreover, they differ widely in their effects or therapeutic applications, and are seldom if ever indicated at the same time. When vomiting is desired, nausea is not; and when we want the best effects of nausea, vomiting interferes with and retards them. Nausea coincides with and enhances antiphlogistic effects. In this respect the nauseatics have much the same relation to the antiphlogistics that antisbestics have to tonics. If protracted and caused by tartrate of antimony and potassa, which is strongly antiphlogistic independent of its nauseatic power, its anti-

phlogistic effects may be nearly equal to those of bloodletting. Like the latter, therefore, it is to be avoided as much as possible when we would prevent exhaustion, while vomiting in some such cases may be beneficial, but should be produced, of course, by articles that cause the least nausea. Though a catalogue of the nauseatics would coincide very naturally with that of the emetics, yet it would not do so exactly, and as the two processes differ so widely as therapeutic agents or processes, they need to be treated of separately. Such were Dr. Tully's reasons for regarding them as distinct, and we think them sufficient.

6th. *Ergastics.*—The physician has frequent occasion to prescribe some form of exercise, active or passive—bathing, friction, rubbing or some of the agencies or appliances comprehended in the term shampooing, either as principal or auxiliary means for the restoration of health. The consideration of these belongs to the pharmacologist; and the bringing them together, arranging and comparing them must be preliminary to a good treatise upon this whole subject, which is so much needed. May we not expect such an one ere long from some of those who trust in nature and think lightly of drugs? Though the last in our list, it is by no means the least important. It is to be regretted that Dr. Tully did not live to write his proëm to this and also the class anthelmintics, a spurious class as he regarded it.

Some years ago, a man in New York gained a reputation for curing dyspepsia, and, according to his announcement, without the use of drugs. For a time his treatment was kept secret; but it came out at last, and was found to consist wholly in kneading the bowels, or in manipulating and mechanically agitating the abdominal viscera for a certain length of time and at stated intervals, till their natural action was restored. Certain natural bone-setters, as they are called, have gained celebrity by means that may have been too much neglected by educated surgeons; viz., by moving, exercising or handling, with a certain degree of violence even, injured or diseased joints; with the pretence, of course, of setting dislocated bones. To ignore the success of all such celebrities and refuse to take hints from their methods, is not to act the part of a wise or high-minded physician.

Upon a close examination of the manner in which the last six classes are founded, it will be perceived that they are in every way analogous to, and have all the essential characteristics of the twelve preceding ones; and doubtless when we become as familiar with their use, they will be found as indispensable in practice. There are several of the old classes that are of less importance than either of the new ones.

Doubtful Classes.

Besides the twelve old and the six new classes thus admitted as genuine, there were three others that were doubtful—viz., emmenagogues, blennagogues and ecbolics.

We have no articles at present that act directly upon the catamenial excretories to excite their activity. Stephenson and Churchill, however, think there are two European plants—chenopodium vulvaria and charoxylum fœtidum—that have been recently ascertained to act in this way, and are to be considered as true and proper emmenagogues; but as all that have been used for this purpose and have been so called heretofore, obviously produce their emmenagogue effects by virtue of an adenagic, tonic, antisbestic, or some power which is already the foundation of another class, their opinion needs confirmation. Nevertheless, it is possible, perhaps even probable that such a power will yet be discovered as belonging to some article but imperfectly understood or wholly unknown at present.

There is the same uncertainty about blennagogues, or articles that act directly and independent of an adenagic, oresthetic or antisbestic power to increase the secretion from the mucous membranes generally. There are none at present known to act in this way; and yet both true and proper blennagogues and true and proper emmenagogues may be looked for, and with some hope of success.

There is scarcely a more interesting problem in therapeutics than the modus operandi of ecbolics. If Dr. Tully's is not the first attempt to solve it, it is the only one worth considering. Though ingenious and plausible, it may be deemed hypothetical, as must be, to some extent at least, most of our explanations of the modus operandi of medicines at present. His inferences, drawn from undisputed facts, are legitimate and rational. Instead of an hypothesis, therefore, it may be better characterized as a rational discussion about facts that may prompt and direct further inquiry. If his explanation is true, an ecbolic operation, like the two preceding ones, is only indirect or secondary. It is but a part of either a narcotic or an erethistic operation.

These three classes, therefore, can only be admitted on probation. When the essential points in each case are fully settled, one or all of them may be taken into full fellowship. We should be as anxious to include all that are true as to exclude those that are false.

False or Spurious Classes.

The following classes are found in most systematic works:—1, anthelmintics; 2, refrigerants; 3, expectorants; 4, antispasmodics; 5, antilithics; 6, errhines; 7, sialogogues; 8, antidotes; 9, antiseptics; 10, specifics. Upon the plan here adopted these are all to be discarded, and for the same reasons that the first two—anthelmintics and refrigerants—were discarded when we were in search of the principles to guide us in selecting foundations for the new or remaining classes. The powers on which they are founded are all of them indirect or secondary. Dr. Tully retained errhines and sialogogues, however, but admitted that there was no true foundation for either of them.

Anthelmintics.

This is the place to make the suggestion proposed in regard to anthelmintics. The following is Dr. Tully's definition of the class, with the remark that follows:—"Anthelmintics are articles supposed to have a peculiar power: *first*, to obviate the morbid condition which is essential to the development of intestinal entozoä; *second*, to destroy them when they are developed; *third*, to evacuate them either living or dead." "The powers by which the development of intestinal entozoä is prevented and by which they are destroyed or evacuated are numerous, and are already the foundations of other classes, as I trust I shall show satisfactorily in my proëm to this spurious class. Accordingly, upon my plan there is no foundation for a class of anthelmintics."

Had the proposed proëm been published, we might have learnt something of his views of the modus operandi of such articles as kousso, male fern, pumpkin seeds, &c., which, so far as they affect the human system, must be considered as absolutely inert, but which have nevertheless proved quite efficient anthelmintics; and also of others, which, like spigelia Marilandica, pomegranate, oil of turpentine, &c., though they belong to one or another of the foregoing classes, yet are not at all dependent upon any power they exert upon the human system for their anthelmintic effects. If spigelia proves anthelmintic by virtue of its narcotic power, it must be the worms that are narcotized and not the patient; and so of pomegranate and turpentine, when they operate as anthelmintics it must be by their effects upon the worms themselves instead of the patient. And these are not the only articles used for this purpose, the success of which must be attributed, in whole or in part, to their operation upon the worms, independent of any power they exert upon the human system. There seems, therefore, to be an obvious necessity as well as a true foundation, even upon Dr. Tully's plan, for this class. If admitted, however, it might involve the necessity of some slight alteration in his definition of the word medicine, and also his definition of pharmacology itself. This appears to be an anomaly in the modus operandi of medicines which he had not in view at the time these definitions were made.

The class, if admitted, should be made up of such articles as have been mentioned, excluding those he had reference to as acting upon the alimentary canal in such a way as to prevent the development of worms, or to render it uninhabitable for them; and without reference to their modus operandi in their destruction or evacuation.

There are eighteen, or, if an anthelmintic power is admitted, nineteen of these elementary or fundamental powers in materia medica; and every article that is of any value in the treatment of diseases is so by virtue of its exerting one or another, or some combination of these. A specific may be defined an article that cures a given

disease by the exertion of some unknown power, and is therefore without the pale of scientific medicine.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

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The Russian Epidemic.—Of a sudden the world is startled by the intelligence that a fearful pestilence is ravaging Eastern Europe, and simultaneously we hear that it already threatens an invasion of the rest of that continent. Kingdoms are alarmed, and as instant information of its nature and progress is demanded of foreign ministers resident in Russia, as if it were the barbarous hordes of Muscovy themselves that were about to invade France and England. The quarter from which the danger threatens is indeed one to create alarm among the nations of Western Europe, for from the East have come in past centuries those terrible epidemics of the plague, the mere mention of which even now causes horror, and it was along the same fatal path that they watched the inevitable approach of that later scourge, the cholera. This pestilence appearing at Moscow in September, 1830, reached Riga in May and St. Petersburg in June of the following year. From Warsaw it extended to Dantzic and thence to other parts of Prussia, whence it continued its western course, reaching England in October. There is reason for alarm in Europe, then, for the same telegram which sends us the intelligence that the plague has broken out in St. Petersburg, and that the number of its victims has already reached 20,000, of whom forty were physicians, says—" in its steady advance towards the west it has now reached the Prussian frontier, and in a milder form already shown itself in the towns of Königsberg and Dantzic. In the Waldai hills, whole villages are said to be depopulated." Still later, we hear that it has appeared in Hanover and Brunswick.

There can be no doubt that a frightful epidemic of some kind is devastating Russia and the adjoining countries, but whether it is a new disease or a revival of the historic plague, which has never been wholly extinct in the East, and which as late as 1835 ravaged Egypt, we are as yet unable to determine. The Russian government, as usual, is extremely reticent in its publication of information respecting home matters, and the only reliable accounts which have yet reached England and France are from non-professional sources. From these reports it appears that several forms of disease of a very fatal character are prevailing in St. Petersburg, but whether they are various manifestations of one affection or distinct diseases, it is now impossible to say. It is reported that that city contains at present 43,000 more laborers than usual, and that they are to a great extent deprived of their ordinary supply of animal food, and are obliged to live almost wholly on rye bread, which contains a considerable quantity of spurred grain. It is amongst this class that the mortality has been the greatest. The English ambassador, in his despatches to the

home government, states that the affection was unknown in Russia till eight months ago, and that it is contagious and is called relapsing, remittent or bilious typhoid, typhus recurrens, &c. M. Gworling, government physician at Perm, says that he has seen the same disease in America in 1857 and 1858, where it raged with such virulence as to be mistaken for yellow fever. The *Medical Gazette* of St. Petersburg states that it first appeared last autumn in the north-east and south-west portions of the Russian Empire, and has gradually approached the capital, where it seems to have acquired a tenfold virulence and rapidity of progress.

Dr. Tillner, physician to the Grand Duchess Maria of Russia, furnishes the following description, in the *Nazione* of Florence, of apparently but a single form of the disease :—

"The malady appears to be neither a fever of an intermittent or continuous nature, nor yet a simple typhoid fever; but it certainly is very virulent and dangerous. According to the opinions of the Russian physicians, it is the same fever that was observed for the first time in Scotland in the year 1819, and denominated in that country the intermittent fever, from the length of the intermissions and the prolonged attacks. This fever is ushered in by cold shivering, alternating with remarkable heat (from 40 deg. to 41 deg. centigrade, or 106 Fahrenheit), the pulse beating 130. Great prostration and disorder are observable in the nervous actions, although the state of the mental faculties remains unaltered; frequent pains are felt in the head and limbs, great pain is also felt in the left hypochondriac region, and an examination by palpation and percussion proves the spleen to have immensely increased in volume. The skin is yellow in color, owing to the liver being likewise affected by the malady. The initiatory attack of the fever lasts from seven to eight days, and terminates with a very copious perspiration. After the first paroxysm, an interval occurs of seven or eight days, during which the patient appears almost as well as ever, but at the expiration of that period a second attack manifests itself, like the first, but accompanied with still greater prostration. This continues also about seven days, terminating like the other, with profuse perspiration. Sometimes a third paroxysm declares itself after a further interval of seven days, one of the symptoms being a burning thirst and complete paralysis, and the patient sinks into the most profound state of prostration. The rate of mortality is 8 per cent., and the victims of this malady die during the second attack, usually from a kind of general paralysis, or through serious derangement of the nervous organs, with real decomposition of the blood, and an enormous increase in the spleen. The liver also becomes greatly enlarged, but the intestines, on the other hand, are either found healthy or else hardly congested. Everything has hitherto failed to shorten the duration of the febrile attacks. Salts of quinine, given in large and small doses, have been quite ineffectual to overcome the attacks characteristic of this malady. In the second paroxysm, in which there is increased prostration of the forces, the most powerful stimulants have been administered—such as moss wine, alcohol, ether, camphor, &c., but they produce little or no effect."

The latest accounts by telegraph to the London *Times* describe

three several maladies as existing at the same time in St. Petersburg. In October, meningitis spinalis appeared, by which children were chiefly attacked, the mortality being 20 to 50 per cent. The symptoms of this affection apparently closely resemble those of the recent epidemic of cerebro-spinal meningitis, or spotted fever, as it has been described in previous numbers of this JOURNAL as occurring both at the South and in New England, and which still lingers in many parts of our country, manifesting itself occasionally with great virulence in small towns, and not exhibiting any disposition to centre in populous cities. It is this form of the epidemic which has appeared in Poland and Prussia, the average mortality ranging from 30 to 60 per cent.

In November, typhus was added to the former affection, occurring at first periodically and gradually developing into a malignant species of febris recurrens. The fever lasts a week at a time, the several attacks being separated by intervals of this same length. During these intervals the health is apparently so good that the patients are dismissed from the hospitals, who soon afterwards die. A special committee has been appointed to look after those thus apparently cured. On the second or third attack, collapse, decomposition of the blood and paralysis generally ensue. The deaths, at first 20 per cent., have risen to 40 per cent. In many cases pustula maligna has been observed. Thus imperfect is the sketch, which comes to us by telegraph, of this form, which coincides with the description of Dr. Tillner above quoted.

Quite recently "Siberian plague" has also broken out. A strong disposition to vomit, which cannot be satisfied, swelling of the abdomen, pestilential carbuncles, and a dark color of the skin are its unmistakable symptoms. Of this 70 per cent. die in a few hours.

Whatever may be the nature of this affection, it behooves us, so far removed even as we are from its present advance, to be on our guard, and to enforce an immediate and strict quarantine of all vessels coming from northern European ports.

THE accompanying letter addressed to Dr. Jackson, on the occasion of his resignation of the office of Visiting Physician to the Massachusetts General Hospital, by the medical officers of that institution, expresses so generally, as we believe, the opinion and good wishes of the profession of this city that we have asked permission to publish it.

To Professor J. B. S. Jackson.

DEAR SIR,—The undersigned have learned with great regret that you have resigned your office as attending physician to the Massachusetts General Hospital, which you have filled for a period of twenty-five years with great honor to yourself and with the greatest benefit to the Hospital, to science, and to humanity.

They beg leave to recal to your mind the immense strides which have been made during this period in the science of pathological anatomy, and more especially in its pursuit in this city, where one large museum of pathological specimens has been collected, and another one greatly increased and adorned by your efforts. During this time not only many classes of students, but also those advanced in the profession, have listened to your instructions, and have profited by your

example. For these services both the medical profession and the community at large are especially indebted to you.

Trusting that you may long continue your useful and distinguished career as a medical teacher, and that we may often have the pleasure of listening to your valued instructions at our medical meetings, and maintaining our agreeable private relations with you, we are, with considerations of the highest respect and regard,

Your obedient servants, MEMBERS OF THE MEDICAL STAFF
Boston, April 6, 1865. OF THE MASS. GEN. HOSPITAL.

THE DEATH OF DR. WILLIAM EDWARD COALE, which took place on Monday last, came very suddenly upon his professional and other friends. He was a native of Baltimore, and a graduate of the University of Pennsylvania, and for several years an assistant surgeon in the Navy. For the last twenty-two years he has been a practitioner in this city. Coming here a stranger, he soon had patients and friends to appreciate his talents and acquirements. Of a good family, having two signers of the declaration of independence amongst his ancestry, of parents whose honesty and fidelity were proved in times of vicissitude and adversity, Dr. Coale was trained to that conscientious discharge of his duties which has characterized his course as a student of medicine, as an officer in the navy, as a practitioner in a large city, as well as in his private relations to his family and friends. In the summer of the year 1862, he offered his professional services to the government, and showed his scientific skill and activity for several weeks in that memorable campaign of the Army of Virginia. His labors were appreciated by those who employed him and those to whom he ministered. With his natural tact and the experience he had enjoyed in the navy, he could discharge such duties satisfactorily to all concerned, and though obliged by sickness to give up and to return home, he went back to the work in November of the same year, and visited the military hospitals in Tennessee and Kentucky as an Inspector of the Sanitary Commission. With a predisposition to hepatic trouble, he contracted disease by exposure in those malarious regions, from which he never recovered and to which he has at last succumbed. His first years of professional life were given to the service of his country; his last years were marked by suffering contracted in the same service, and in him we have one of many instances in which civilians have lost their lives from disease contracted in the service of their country. At a period of life when many years of usefulness might be before him, with unabated activity in the pursuit of knowledge, with a kindly nature and a sympathizing heart, endearing him to friends and patients, he has suddenly been summoned to his account. He was for many years an officer of the Massachusetts Medical Society and an instructor in the Harvard Medical School; and his professional friends and associates as they stand beside that open grave must bear their testimony to his kindliness, activity and fidelity, and say a word of sympathy to the bereaved family, whose loss in this world is irreparable, and whose only real comfort can be in looking forward to that re-union in the Heavenly Kingdom, where pain and sickness, parting and death are unknown.

Caffeine in the Kola-Nut.—With a good supply of fresh Kola-nuts the white trader in Africa can generally secure the friendship and protection of the native chiefs. From time immemorial these nuts have been chewed by the negro tribes of the Western tropical regions, and their use has gradually extended over a considerable portion of the African continent. Strange to say, our best botanical treatises give us little information respecting these highly-prized seeds. They tell us that they are obtained from the Kola-tree (*Cola acuminata* or *Sterculia acuminata*), a plant belonging to the natural order *Sterculiaceæ* (or the Silk-Cotton family); but what they say about their use consists, for the most part, of incorrect statements culled from the works of old travellers. Thus in Professor Bentley's *Manual*, which is generally so trustworthy, the Kola-nuts are dismissed with a trivial notice of their supposed property of sweetening water that has become more or less putrid.

At a recent meeting of the Pharmaceutical Society, the true nature of the popular masticatory of West Africa was revealed in two excellent papers; one, by Dr. Daniell, giving full information respecting its history and properties, and the other, by Dr. Attfield, recording the results of a chemical analysis.

Dr. Daniell having found that the administration of a decoction of the fresh seeds, as a remedy for diarrhœa, was invariably attended with loss of sleep, suspected the presence of caffeine or some analogous principle. He thereupon commenced to seek for an alkaloid in the Kola-nuts, and succeeded, by a rough chemical process, in obtaining numerous aciform crystals resembling those of caffeine That the validity of his discovery might be established by a more elaborate chemical examination, Dr. Daniell placed a quantity of the dried nuts in the hands of Dr. Attfield, the able director of the laboratories at Bloomsbury Square.

The result of Dr. Attfield's analysis has fully confirmed Dr. Daniell's discovery of caffeine in the Kola-nut. A quantitative determination showed that the proportion of the alkaloid present in the dried nut is two per cent. The proportion in coffee is from one-half to two per cent.; and in tea from one half to three and a half per cent.

Caffeine was discovered in coffee by Runge, in 1820. Seven years later, Oudry found in tea a crystalline substance which he called *theine*, supposing it to be a distinct compound; but Jobst and Mulder, in 1838, showed that it was identical with caffeine. Martius, in 1840, found the same substance in guarana; and Stenhouse, in 1843, obtained it from Paraguay tea That the Kola-nut must now be added to the list of vegetable products containing caffeine is indeed a remarkable fact. Tea, coffee, guarana, Paraguay tea, and the Kola-nut are obtained from plants widely separated in botanical classification; yet they all contain the same principle, and are all used to satisfy a natural craving in man for nervous stimulants.

For further information respecting the chemistry of the Kola-nut, we must refer our readers to Dr. Attfield's elaborate paper.—*Chemist and Druggist.*

Prevention of Rust in Iron.—Many a valuable hint is to be obtained from an intelligent practical laboring man, which may lead the

philosopher into a train of ideas that may, perhaps, result in discoveries or inventions of great importance. When bricklayers leave off work for a day or two, as from Saturday to Monday, they push their trowel in and out from the moist mortar, so that the bright steel may be smeared all over with a film of it, and find this plan an effectual remedy against rust. In Wren's "Parentalia" there is a passage bearing upon this subject:—"In taking out iron cramps and ties from stonework, at least 400 years old, which were so bedded in mortar that all air was perfectly excluded, the iron appeared as fresh as from the forge." Oxygen, which is the main cause of rust, is abundant in the composition of both water and the atmosphere; and that quicklime has an astonishing affinity for it is evinced in the homely practice of preserving polished steel or iron goods, such as fire-irons, fenders, and the front of "bright stoves," when not in use, by shaking a little powdered lime on them out of a muslin bag, which is found sufficient to prevent their rusting. Another instance, very different and far more delicate, bearing upon the same principles: the manufacturers of needles, watch-springs, cutlery, &c., generally introduce a small packet of quicklime into the same box or parcel with polished steel goods, as security from rust, before sending it to a distant customer, or stowing it away for future use. These cases are extremely curious, because, as a general rule, bright steel or iron has a most powerful affinity for oxygen; consequently it is very readily acted upon by damp, and is rusted in a short time, either by decomposing the water and obtaining oxygen from that source, or direct from the atmosphere. It is not absolutely essential that the quicklime should be in actual contact with the metal, but if somewhere near, as in the case of the parcel of lime packed up with the needles or watch-springs, the bright metal will remain a long while without the least alteration in its appearance; the lime (which is already an oxide of calcium) either receiving an additional dose of oxygen or being converted into a carbonate of lime.—*American Druggist's Circular.*

Virchow and the Cellular Pathology.—A correspondent from Berlin writes:—"Perhaps the most important thing I have to tell you is as to a recent change in Virchow's opinion regarding the cell theory. This change has been caused by the discoveries of Recklinghausen (*Virchow's Archives*, about a year ago) in the cornea. He has shown that the corneal cells have not special cell-walls, but are merely *spaces* between masses of intercellular substances. The nuclei in the angles he therefore considers *free*, and he says that many of them can move along the canaliculi from one angle to another. Moreover he says that the interior of these canals is continuous with that of the lymphatics; you can inject the lymphatics from them; so that, according to him, the origin of the lymphatics is to be found in the canaliculi of the so-called connective-tissue corpuscles. Then he says that the corpuscles of tendon and connective tissue are merely spaces with contained nuclei—a view which, of course, is *not new* to an Edinburgh man. Virchow admits all this; he admits that the corneal corpuscles are not cells. He seems rather reluctant to admit that those of tendon and connective tissue are the same, but he does not deny it; and he told me personally that he *now did not regard a cell-wall as an 'es-*

sential part of the cell,' as stated in Cellular Pathology; but that a nucleus surrounded by a molecular blastema was sufficient to constitute a cell; then he says that the outer part of this cell blastema consolidates and forms a cell-wall, as Beale has shown, and that this takes place in the amoeba when placed in fresh water. This of course is a great triumph for Goodsir, who long ago was cautious enough not to say that the cell-wall is always present."—*Med. News and Library,* from *Edinburgh Med. Jour.*

Tinned Wire for Sutures.—We have received a letter from Dr. Goodale, of Portland, Me., containing a sample of fine Swedish iron wire coated with tin, which, as he suggests, appears to be applicable to all the uses in surgery to which silver wire is put. It is manufactured in that city at the very reasonable price of 60 cents per pound.

In Dublin about one fourth of the whole hospital accommodation in the Hardwicke Fever Hospital is occupied by cases of smallpox.—In India, it is said 7000 out of a population of 50,000 of the native inhabitants of Lahore have fallen victims to it within two months.—The prevalence of smallpox in Algiers has induced the French medical practitioners to instruct the natives in the practice of vaccination.

The "Ward" U. S. General Hospital, Newark, N. J., Assistant Surgeon J. Theodore Calhoun, U. S. Army, commanding, which has hitherto consisted of some old factories, is henceforth to be a pavilion hospital of the modern style.

An effort is being made to have a dental college incorporated by the New York Legislature, to be located in New York city.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, April 22d, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	63	46	109
Ave. mortality of corresponding weeks for ten years, 1853—1863,	44.2	38.3	82.5
Average corrected to increased population - - - - -	00	00	90.75
Death of persons above 90 - - - - - - - - -	0	0	0

The following communications have been received:—Valedictory Address at the Massachusetts Medical College; Construction of Hare-lip Pins; Case of Death from Suffocation; Case of Persistent Gestation; Ophthalmic Operations at the City Hospital.

Died,—In this city, 24th inst., William Edward Coale, M.D., 49.—At Milton, Vt., 10th inst., by his horse falling with him, Dr. N. W. Fairchild.—In this city, 18th inst., W. A. Arthur Folts, a student of medicine, aged 21 years.—In Augusta, Me., Dr. Ezekiel Holmes, for nearly a third of a century chief editor of the *Maine Farmer,* aged 63. He received the degree of Doctor of Medicine from Bowdoin College in 1824.

Deaths in Boston for the week ending Saturday noon, April 22d, 109. Males, 63—Females, 46. Abscess, 1—accident, 7—apoplexy, 1—inflammation of the bowels, 1—disease of the brain, 2—bronchitis, 2—burns, 2—cancer, 1—cholera infantum, 2—consumption, 15—convulsions, 1—croup, 5—debility, 1—diarrhœa, 1—diphtheria, 1—dropsy, 2—dropsy of the brain, 8—drowned, 1—erysipelas, 2—typhoid fever, 2—hæmorrhage, 1—disease of the heart, 2—homicide, 1—infantile disease, 5—insanity, 1—intemperance, 1—jaundice, 1—disease of the kidneys, 1—ulceration of the larynx, 1—inflammation of the lungs, 8—marasmus, 2—old age, 2—paralysis, 1—peritonitis, 2—premature birth, 1—rheumatism, 1—scalded, 1—smallpox, 10—syphilis, 1—teething, 1—unknown, 6—whooping cough, 1.

Under 5 years of age, 36—between 5 and 20 years, 20—between 20 and 40 years, 26—between 40 and 60 years, 16—above 60 years, 11. Born in the United States, 76—Ireland, 23—other places, 10.

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AN ADDRESS*

BY REV. THOMAS HILL, D.D., PRESIDENT OF HARVARD UNIVERSITY.

[Delivered to the Graduating Class at the Massachusetts Medical College, March 8th, 1865.]

GENTLEMEN,—I am not insensible to the kindness of those who have asked me to address a word of good cheer to the young men leaving this school at the present time. They could not have expected from me any words bearing directly upon the details of the medical art, and cannot be disappointed if I confine myself to general views, and to such parts of the subject as are open to all observers.

You, gentlemen, have chosen your profession; inspire yourselves to perform with zeal and honor its duties, by taking first of all a just view of its dignity and usefulness. Your teachers, and other venerated masters in the art of healing, have given you and will yet give you practical directions and instruction in the detail of your duties; I can only hope, by the thoughts which I bring to your remembrance, to inspire in you some new sense of the value of those duties and of their dignity. No man can do well any work unless he does it from high motives and with a lofty spirit. No man can adorn a profession until he first honors it by feeling that it honors him.

Now the medical profession is honorable, and bestows dignity upon him who pursues it conscientiously. It lays under contribution all the physical sciences from the lowest to the highest, and requires no small aid from philosophy and theology also. It offers great opportunities of usefulness, and appeals to the noblest motives in the heart of its professor.

The final cause of the creation of this planet is, as far as man can see, to afford a school for man's education and a theatre for his action. To this end the lessons of creation are arrayed in progressive series, and the fundamental ideas are embodied with various degrees of fulness in various beings. The creation has thus appeared to some minds almost tentative in its form. Thus in a ge-

nus of plants, or of animals, we have the fundamental idea of the genus repeated sometimes in a hundred or even more species, as though the Creator had endeavored to set forth the idea of the genus in one species, but had been dissatisfied with his work and therefore tried to do better again and again. The explanation of this apparently tentative process is perhaps found in the remark of a friend of mine, that the Creative mind manifested its thoughts in this method of finite minds in order to render those thoughts intelligible to finite minds. In Creation as in Revelation, the truth is given to us line upon line, precept upon precept. Any one idea expressed in the universe is expressed in its simplest forms and in its most complex, and also in all intermediate degrees, in order to lead us to its more complete comprehension. The idea of a vertebrate animal expressed in its fulness in MAN, your professors of anatomy have endeavored partly to expound to you, but in order to do it fully they compared man with the whole class of mammalia, and even that class with its co-classes of inferior grades. To adapt the Universe to be the text-book wherein our lessons might be found, it was necessary thus to simplify and explain with great variety of illustrations—radiates, mollusks, articulates, fishes, selachians, batrachians, birds, mammals, each in their thousand forms, constitute pages in the anatomical text book of Nature.

In like manner for a full development of the idea of life, and of the normal functions of the body, it was necessary to introduce disease. Everything that our human minds can know they know partly by contrasts with its opposites. Everything which is capable of excellence must be capable also of defects or of positive vice. Thus, even in geometry (and I hold that geometry, the science of space, may be legitimately used to illustrate any and every phenomenon which occupies space), the circle and the ellipse are more perfectly known by contrasting them with mere approximations to the perfect forms. The orbits of the planets are not actually ellipses, but only would be such were there no retardation by the ether, no perturbations by comets, or by fellow planets, or by satellites, or by any other cause. This approximation to the ellipse calls our attention to every point in the ideal curve, and by its very variations from the form calls our attention more emphatically to the distinguishing of the ideal perfection from the actual imperfection. Thus, also, the forms of crystals are not absolutely those of theory, but only approximations thereto. The leaves of plants, in their wonderful phyllotaxis, do not actually fulfil, but only suggest the arrangement of perfect beauty and exact equity which would give each leaf an equal access to the sky. No two leaves, even, of one plant can be readily found which will fulfil the same type in the same manner. Yet how distinct our ideal of a maple or an elm leaf, a leaf of digitalis or of cassia! The variations between individual leaves of each species, endless as they are, do not confuse us as to the specific type, but

only point out to us more emphatically what the type is, and how individual peculiarities differ from specific differences. Even a child sees the pigeon in every one of its disguises, and recognizes the unity in the most diverse breeds of dogs. A botanist, in like manner, soon acquires a marvellous detective facility with the Protean forms of certain plants, so that at last not even the vagaries of lichens and fungi can mislead him.

Nor can an invariable standard of health be found in the vegetable world. The mighty redwoods of California have sustained themselves a thousand years; but meanwhile what generations of ordinary trees, even in the wild forests, have died, smothered by more vigorous neighbors, or having exhausted the soil, or being overpowered by insects, or by parasites, or by fungi beginning in an unsound spot and spreading over all.

What wonder, therefore, since the universal plan of nature is a partial and not perfect embodiment of ideas, what wonder that the animal frame and the human frame itself was made subject to imperfections of various sorts, producing pain and disease and death—the most certain of all methods to lead the human mind to study the human frame, and make the laws of its action a matter of special research. Looking only to the intellectual needs of man, it was necessary, in order that we might be led to study the wondrous original text-book on anatomy and physiology, to call our attention to it by sharp pains and fearful diseases, and by causing even mortal woe; it was necessary, also, to give it to us not only in innumerable editions, but, as it were, containing in the various copies every conceivable misprint, and ill adjustment of parts in both printing and binding, that we might acquire the familiarity with it in all its variations of readings, not only of students, but of correctors of the press.

This work of acquisition, gentlemen, has occupied you many happy months, and I trust will yet occupy you many years. It repays the labor of the humblest intellect, it tasks the full energies of the mightiest. The human body and its functions, in health and disease, offer numerous problems easily solved by patient attention, the solution being also of the highest value. But they offer also innumerable problems of every grade of difficulty, even up to points which we concede must be insoluble to us so long as we are in the body. In the pursuit of your chosen profession, then, you have an intellectual gymnastic, possessing the peculiar advantage claimed for rowing, that you may make it just as light and just as severe as you choose; and having, also, this great advantage over many other gymnastics—that your labors thereon are productive labors, bringing forth good for yourselves and for your fellow-men perpetually. And this intellectual training, given by the study of medicine, is not only of various degrees of severity according to your choice, but it calls into action various powers of the intellect. Your work must be founded on observation, and like all careful observation of nature, it trains

the eye and the ear and the touch, and forms the power of recognizing and interpreting indications not visible, nor audible, nor tangible to other men. There is a skill in reading and interpreting nature which faithful observers obtain that cannot possibly be gained from books or from lectures; a skill partly arising from faithful observation and partly from natural aptitude for such observation; but which is one of the most valuable of all acquisitions to the botanist, to the zoölogist, and above all to the physician; by which he sees at a glance in the plant, in the animal or in the patient that which he cannot describe in words to his student, but which the student can only learn to see by looking for himself. Your work must be based on observation—patient, careful, extensive observation. Then it demands also memory, and imagination to bring vividly your observed facts together, and suggest hypotheses for their explanation; and it requires reasoning—cautious, exact, severe reasoning—to test your hypotheses, to reject the untenable, to cling to the more probable. It requires strength of will, also, to hold the judgment in suspense when no hypothesis is tenable, and nevertheless to decide promptly, when there is need of action, which way the balance of probability inclines.

In short, gentlemen, although I speak of that which I have not pursued, to those who have begun its pursuit, I cannot but regard the studies of a faithful physician, alive to the great opportunities of his profession, as one of the finest of all modes of discipline for the understanding. Happy in your choice of a profession, you will find that a strict attention to the duties of your calling, so far from cramping your powers of thought, will enlarge your range of view and discipline every power of your mind.

And yet it will not be wise, even, for a physician to confine his studies wholly to the strict line of his profession. The healthy soul is interested in the whole range of studies presented to us in the school of life, and attains higher success in the mastery of a particular subject by keeping up a system of general exercise upon all subjects. I recently heard of an American physician, of good reputation, declaring that he was wholly unmoved at hearing of the fall of Charleston, and entirely indifferent as to the result of our great national struggle—whether the nation or the conspirators were finally triumphant; and I felt that I should be very sorry to exchange for any man's stores of medical learning or acquisitions of medical skill, my own feeling of sympathy with my nation, and of grateful acquiescence in the Divine Providence which has now caused the slaveholders' conspiracy to suffer humiliation and defeat in the very seat of its origin.

The soul is kept in health by keeping up its interest in a variety of topics; and the man whose profession requires the constant exercise of his intellectual powers, will find strength and relief in having some other study to which he can turn his mind for relaxation. One

of the wisest of your profession recommends his patients overworked by professional cares, to take off their boots in the evenings and wear slippers. The advice is good, and should be heeded by the physician himself. Let him religiously consecrate a part of every week, if possible of every day, to the neglect of his professional studies and to pursuits that will arouse the mind to a pleasant interest in something else. He will resume his boots for his daily work with the more pleasure and the more strength. The author of Florula Bostoniensis has been all the better physician for his side interest in botany and architecture; and the Songs in many Keys, frequently patriotic and devout, which have been sung by a younger professor, have not injured him as a successful student and teacher of anatomy, the science whose earliest text-book was declared by its author to be a hymn to the Creator.

But there was doubtless a higher end than the cultivation of the intellect aimed at in rendering the human frame liable to accident and to disease in its various forms, admirable as the intellectual training given to our race by nosology and therapeutics and surgery undoubtedly has been and will be. The training of the affections and of the will is of more importance than the training of the mind.

Consider, then, for a moment the moral lessons taught to the human race by the weakness and defects which render your art necessary. So far as disease can be prevented by care and foresight on the part of the individual, "what a searching preacher of self-control is the varying phenomenon of health!" So far as it can be prevented by associated action in improving the sanitary condition of the community, what a stirring preacher of reform is the pestilence that walketh at noonday! When disease and suffering admits of cure, or even alleviation, through the care of physicians and nurses, what new springs of love and gratitude well up in the heart; what new bonds of affection are formed between members of the family and between different families! And even when the evil is without remedy, what comfort to the soul even in unavailing sympathy, what deep peace in resignation to the appointments of Infinite Wisdom and Infinite Love! That Wisdom and that Love appointed our entrance into life to be through these tabernacles of the flesh, and undoubtedly awaken in us far deeper and holier affections towards each other and towards His ineffable goodness, by making us, through the weakness of the body, dependent on each other, than could be awakened were we proof against accident and against disease.

The physician is, then, the minister of God in a difficult, intellectual, moral and sacred service. He requires for that work a delicate and thorough training of the powers of observation and of the judgment; stores of knowledge in regard to anatomy and physiology, relating both to healthy and normal conditions of the body, and also in morbid states and under the influence of remedial agents, implying a knowledge also of the materia medica and of chemistry,

and even of mechanical physics; stores of knowledge also concerning the mental phenomena of sound health and of impaired powers in the brain and nervous system; he requires, in addition to this quick eye, this ready ear, this skilful touch, this varied learning, this sound judgment—he requires, I say, a sympathizing heart, a cheerful and loving spirit, a wise religious trust in God, and an unfailing tact in meeting the erroneous and extravagant demands of those who either distrust him, or, trusting him, expect of him more than lies in mortal power. Gentlemen, it is a high and honorable service, to which none but the highest and most honorable motives, I am happy to believe, usually impel a young man. And could I read and interpret to this assembly the ideals and aspirations of these young men to whom the University this day gives its sanction as worthy students of their sacred art, I doubt not that this utterance of *their* views and their purposes would make all that *I* say of the dignity and usefulness of their office seem cold and feeble.

May the love with which they give themselves to their chosen profession never grow cold; the estimate which they set upon its usefulness and dignity never be lessened. I dread nothing for a young man so much as the loss of youthful enthusiasm; the wisdom of maturer age is gained at too great a cost if it bring the loss of fervent devotion to principles and to truths, the loss of faith in the ultimate success of man, his triumph over nature, his triumph over death and time.

But the attainment of maturer wisdom is not necessarily accompanied by the loss of enthusiasm for truth and of faith in the sublime destiny of man. On the contrary, the very nature of the intellect, and of intellectual processes, leads in a healthy development of the mind ever to wider and deeper views. Is it not so? Consider a moment the tendencies of every attempt to understand the mysteries of the world about us.

No man is satisfied in his theories with what is partial and incomplete. We reach after perfection, we seek totality, unity, completeness, and if we succeed in grasping it, we immediately seek a larger whole, of which this first unity is but a part, and sweeping on with wider and deeper generalizations, end with aspiring after the infinite. The intellect thus seeks ever to comprise all facts in larger and larger formulæ. The equation of motion, formerly embracing only what was recognized as mechanical phenomena of change of place, now embraces, or so it is supposed, all the complicated phenomena of harmony and discord, of heat and cold, of light and shade and coloring, nay, perhaps also of magnetism and electricity and chemical action, and even of chemical differences; so that all that myriad-eyed science has discovered or can discover in this physical universe is the truth of the first record of inspiration that God moved upon chaos, introduced motion in its varied forms into matter, differencing THUS all elements and sending them out on their

perpetual round of varied service. And when all the phenomena of this universe are shown to be merely modes of motion, then will the insatiable imagination press reason into the service of potential physics to show in how many other modes universes might have been or may have been, or may hereafter be constructed.

But it is not the intellect only that thus seeks the infinite. Our hearts yearn for it, our deepest affections are wholly inexpressible in mortal words, and wholly unsatisfied with the approval of finite beings—the tides within us are too deep to be sounded, and rise so high that their waters mingle with the skies.

This aspiration of the intellect after the infinite is satisfied only by Theism, this yearning of the heart for it is satisfied only by Christianity; the eye is not satisfied without the sky and the horizon, which in intellectual vision are found only in God; the heart is miserable unless there be a love which answers to our deepest and most intense affections, and that love is the love of God, as manifested in the redemption of the world.

In the vision of God is alone to be found unity and so rest. The theological point of view, so far from being childish and outgrown by the maturer intellect, is the only point from which complete and correct views can be obtained. No work of human art or skill, whether to serve material uses or æsthetic ends, is properly understood unless it is looked at from the author's point of view. Nor can the grand books of creation and history be interpreted by any other canon. All the universe is the projection into external manifestation of one thought of the Deity, ever acting, according to the sublime theological conception of Maupertius, by the simplest and most economical methods to the establishment of one grand result. The necessity of taking this theological stand-point in order to attain the best results, is illustrated in the most forcible manner by this very principle of the least action. Originally conceived and propounded as a corollary from the purely Theistic conception of Infinite Wisdom and Divine Economy, it has been the fruitful source of innumerable discoveries in physics, and more recently in the hands of one of our own countrymen has remodelled social science, and converted the dismal code of despair into the oracles of hope. The simple law of attraction, exemplified in gravitation and statical electricity, must, from Maupertius's grand theological dogma, hold in every part of the universe in which it can be used. Instead, therefore, of the conflict of interests represented by the British economists as ruling in human society, we may look to find love or attraction as the ruling principle of man's nature; and men drawn together for their mutual benefit, and working, even though unconsciously, together for a common end. Under this higher aspect of social science we shall find all history illumined with a marvellous light, and all examples pointing, by sober scientific induction from innumerable facts, to a confirmation of the prophecy that mankind is ever moving forward (de-

spite the hindrances of error and of sin in people and in their rulers) to a time when poverty shall be unknown, and all men live happy in the pursuit of their own chosen and well-rewarded labor.

I was saying that the universe is doubtless the projection into external manifestation of one single thought of the Deity, ever acting by the simplest and most efficacious means to the production of one grand result. What that result may be, the successive eternities will gradually unfold, and unfold to us. For once perceive that this universe is a book, a speech, embodying the Divine thought; once admit this high Theistic statement of St. Paul that the eternal power and divine attributes of God are made intelligible to men through the medium of the outward creation, and your heart will admit the argument of the Lord, and melt under his appeal—God is not a god of the dead but of the living;—if He thus talks with us, if He thus permits us to read a part of his thoughts, it is a pledge that He will permit us to complete the investigation, it is a pledge that He has admitted us to his eternal companionship. No natural argument for the immortality of the soul can give us greater assurance than this, drawn from the fact that in the outward creation the Eternal God is talking to us and admitting us to read a part of his thoughts.

And yet it must be confessed that while the native tendencies of the soul are thus leading us ever to loftier apirations and a more generous faith, the difficulties which surround us are apt to dampen our ardor and repress our enthusiasm. The young physician, for example, finds with lengthening experience that the laws of morbid physiology are complicated, and the idiosyncrasies of patients numerously varied, and the effects of treatment uncertain—the result being modified by many known causes of unknown and variable efficiency, and by many unknown causes. He is tempted, therefore, to grow gradually sceptical in regard to all remedial agencies, and to fall back simply upon the well-established general laws of health, and upon the general principles of treatment laid down by the earliest Greek physicians—despairing of any new discoveries, and of the possibility of attaining any specific remedies, whether in the materia medica or in modes of treatment. And, so far as this tone of thought tends to a sound conservatism in judgment, it is well. I have sometimes feared, however, while looking on as a spectator, that physicians were inclined to err in the opposite direction, and failed in readiness to examine new views fairly. In all departments of science (I scarce need except even the mathematics) the student finds these two opposite dangers beset him—the lacking of a conservative spirit, and of having it in excess. On the one hand, jealous of his freedom from the authority of opinions, he may confound change with progress, novelty with importance, plausibility with truth, and thus range himself in theology with the latest heresies, in politics with revolutionists, in science with charlatans, in medicine with quacks. This seems to me now the greatest danger to our American mind. Never-

theless I have thought that among physicians there was equal danger of the opposite error; the error into which he runs who clings to established theories so firmly as to be unwilling to hear of any modification or improvement in them; who apparently thinks that all change is for the worse; all novelties, errors; all arguments brought against his opinions, sophistry; all facts which his theory does not explain, trivial; and who therefore drifts with dead wood back into past ages.

But if this is in any degree the temper of the medical profession at the present day, it is not a necessary effect of medical studies, since they furnish in themselves admirable training for the intellect and for the heart. To those forewarned of a danger so easily avoided as this, the danger scarcely exists. I will have faith, therefore, that those who have pursued their preparatory studies in these halls will ever keep an open mind; not open for the entertaining of every stray fancy and whim, either of their own or of other men's devising, which may chance to have some fascination about it; but open for the fair trial of every hypothesis which can bring unquestionable facts to sustain its probability and to promise the feasibility of proving or disproving it. I have faith that they have here learned at least one lesson; that the only true text-book is the creation itself, written for our instruction by the All-wise Teacher, and certain to reward the man who diligently studies any one of its pages. I have faith that they have formed here at least one right method—that of listening devoutly for the word of truth spoken in nature itself; and that they have caught, also, something of the generous spirit of sympathy with suffering, something of the glorious spirit of self-sacrifice for others. When I say self-sacrifice, I of course do not mean to applaud the man who destroys his own health needlessly, or who cuts short his power of fifty years usefulness by the vain attempt to do the fifty years' work in five. The physician must heed the proverb and take care for his own health. But he that desires the office of a physician desires no post of ease and idleness. Labors and dangers, anxieties and cares are his, such as few other men can justly appreciate. It is true that to one who is rightly qualified for the work there are compensations also in the gratitude and affection of those whom he serves, and in the consciousness of right intent and useful action; but these compensations make it none the less true that the privations, difficulties, exposures, fatigue and anxieties are great; and it is difficult to conceive a man of sense choosing this profession unless he has also a large and noble heart.

The great civil war which has been raging in our country for the past four years, has put the medical profession to the proof, and both older and younger members have stood the test. The opportunities of practice in the military hospital and in the field, given to young American surgeons and physicians by this war, inaugurated by the insane followers of Calhoun, although numerous are not of the most

instructive character; and in the readiness with which young surgeons enter upon this service there is evidence only of their humanity and patriotism; humanity which leads them to devote themselves to alleviating the sufferings of those who fall in the field, or are stricken in the camp; patriotism which makes them count it a glory and a joy to undergo any fatigues and dangers if they can only comfort and aid those who are defending our republican and democratic institutions against the assaults of the infatuated aristocracy of the South. Happy in their choice of a profession, they can volunteer in this sacred struggle for freedom without being withdrawn even a single month from their chosen pursuit in life.

Yet let not those who remain at home be rashly charged with lack of patriotic zeal. The strange and awful duties of war thrust upon us in these days do not relieve us from the duties of peace. The contribution of taxes, of gifts, of sympathies from those who remain at home are as essential to the successful prosecution of the war, as the raising of volunteers or of conscripts can be. The less interruption to the usual routine of peaceful labor and regular mutual exchange of services in our country, the stronger we remain and more readily we shall recover our prosperity and usefulness in the future.

Go forth, therefore, gentlemen of the graduating class, each to your chosen field of labor, assured that wherever that field may be, you have a high and noble and beneficent work to perform, as students and interpreters of one of the most important chapters of the volume of nature, as helpers and comforters of your suffering fellow-men, and as servants of the Most High in fulfilling the evident purport and intent of His Providential leading. And may His blessing be upon your labors.

REPORT OF OPERATIONS IN THE OPHTHALMIC DEPARTMENT OF THE CITY HOSPITAL OF BOSTON,

UNDER THE CARE OF DR. WILLIAMS, FOR THE THREE MONTHS ENDING APRIL 1ST, 1865. BY JOHN W. DOOLEY, ASSISTANT.

[Communicated for the Boston Medical and Surgical Journal.]

EXTRACTION OF CATARACT, five cases. In two the upward and in three the downward section of the cornea was made. Ether was given in four cases. One of the cases belonged to the category of black cataracts, the lens being of a very dark mahogany color and extremely hard. Four of the cases were successful, and one will require a slight supplementary operation for the removal of the opaque capsule blocking up the field of the pupil.

Extraction of Cataract by scooping, seven cases. Ether was given in all, and, after upward iridectomy to facilitate access to the lens, Critchett's scoop was employed for removing the crystalline. Five cases afforded good results. One failure occurred in an eye already

extensively disorganized, and where little was hoped for from the operation—and suppuration of the cornea took place in one eye without obvious cause. The other eye of the same patient was successfully operated on.

Iridectomy in eight cases. In four it was done for the formation of an artificial pupil where the normal aperture had been closed by disease—in all of these with excellent results. In two cases of closed pupil resulting from syphilitic iritis, and in two of chronic glaucoma, the operation afforded great relief from pain, and gave rise to no inconvenience; but the condition of the retina was such that only slight improvement to vision followed its execution.

Excision of Staphyloma was done once. The patient had a most unsightly enlargement of the anterior portion of the globe, which was not merely a deformity, but, from being subject to inflammation, constituted a great annoyance. Four curved needles, armed with sutures, were passed through the cornea, from above downwards, just in front of the iris, and the whole central portion of the cornea having then been excised, the needles were drawn through and the sutures tied. No inflammation followed, and the eyeball was reduced to slightly less than its natural size, so as to allow the wearing of an artificial eye.

A SINGULAR CASE OF DEATH BY SUFFOCATION.

[Communicated for the Boston Medical and Surgical Journal.]

A CHILD, previously healthy, except a slight cough, aged five years, while playing about house suddenly coughed, when respiration seemed totally obstructed and the child died instantly.

A few hours after death I attended a *post-mortem* examination with Drs. Huse and Hamilton.

On opening the thorax, the lungs were found inflated and perfectly healthy; some slight adhesions existed between the pulmonary and costal pleuræ of the right side, which were easily broken by the finger.

The trachea was next opened by a longitudinal incision, when the larynx and glottis were found filled with a soft solid substance which took the shape of the larynx and entered the glottis like a wedge, nearly or quite a half inch in length, and evidently driven up by the force of the cough. The incision was next extended downwards, and at the bifurcation of the trachea a similar piece of the same substance was found filling the trachea and extending a little into the right bronchus, as large as a large bean.

Just below the bifurcation was a rounded mass of the same substance, enclosed by a sac or walls like an abscess, the walls in contact with both bronchi and communicating with the right by a small ulcerated opening. A sinus extended upwards and to the right,

posterior to the right bronchus, nearly two inches, terminating in a blind extremity. This sinus was perhaps as large as the bronchial tube behind which it extended, but irregular, dilated into lateral pouches. The main body of this substance was about the size of a large nutmeg. It was, in the different places, alike in color and consistence, resembling in both a piece of *soft* cheese, yellowish-white in color. It was friable, yet with a little elasticity—easily pressed into any shape with the finger or knife.

About one year ago this child had measles, accompanied by some pneumonic inflammation, but soon recovered and has been well, sprightly and active since, but, as the parents say, "she has had a cough ever since, and for the last two weeks has occasionally coughed up small pieces of this same cheesy matter." No scrofula exists in the family; the parents and the other children are healthy.

This was probably an abscess, chronic in its course, which lost its fluidity before it found exit. Most respectfully yours,

East Berkshire, Vt., March 31*st*, 1865. O. F. Fassett.

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

Feb. 27th.—*Puerperal Mania.*—Dr. J. P. Reynolds reported the following case.

Mrs. F., a woman of delicate organization, 28 years old, was confined on the 2d of September for the third time. The labor was easy and natural. Five days earlier, Mrs. F. had a severe fall from a chair on which she had been standing, coming down astride the chair, and receiving the force of the blow on the lower part of the uterine tumor. The nervous shock of this accident was severe, but without known after effects. In the week following her confinement various minor difficulties occurred; at first she required for two days the catheter, then for one or two days she could not retain her urine. This was followed by persistent annoying pain in the uterine region. The lochia disappeared on the third day; the secretion of milk was then normal. She slept very little at night. At the close of the seventh day she had a severe paroxysm of hysteria. From this, however, she recovered without active treatment. On the ninth day there supervened a maniacal attack of considerable severity, characterized by delusions, the patient seeing devils spitting fire at her, people running about the room, &c., violent headache, jactitation, frequent attempts being made to spring out of bed, and commencing convulsive movements of the muscles of the face. For many days subsequently she continued in a highly disturbed state of mind, and with very little memory. Under a highly supporting diet, and the constant administration of ether, she slowly recovered. The ether was at first given to avert an apparently impending convulsion, Dr. Reynolds believing that this would have inevitably occured but for the fact that ether was

fortunately ready in the room. It was subsequently administered whenever the patient was troubled by illusions or suffering from mental distress.

The fact of the development of well-marked mania in a patient of hysterical temperament is interesting, and the value of the ether in modifying the mental state is worthy of notice.

Feb. 27th.—*Puerperal Convulsions.*—Dr. J. P. Reynolds reported the case.

Mrs. M., aged 42, died in her eleventh confinement, five days after delivery. For four months preceding, she had suffered greatly from toothache of severe character, from urgent nausea, bilious vomiting and diarrhœa, with frequent headache. She was also often jaundiced. She rarely had any solid fœcal discharge during this period. There was great nervous irritability. There were also some urinary difficulties. Repeatedly urged to furnish a specimen of the urine for examination, she resisted doing so, and was unwilling to make use of the remedies from time to time suggested. Accustomed during a long residence at the South to use calomel freely, she often begged to have it, but it was not given. On the morning of the 9th of May, after a night of intense headache, she had, at seven o'clock, a severe convulsion, being reported by a neighboring physician who was summoned, nearly pulseless. Under the administration of ether she recovered in about half an hour. The urine, now examined, was highly charged with albumen. Two days later, on the 11th, at 11, A.M., she was delivered, without accident, of a fœtus about seven months advanced, dead. The placenta quickly followed. She continued very restless, making great complaint of pain, not intermittent, in the region of the uterus, and of distress at the epigastrium. She had, at length, nausea and vomiting. At four, P.M., after an incident which vexed her and roused her will, a second violent convulsion occurred, from which period the urine ceased to be secreted. During the remaining five days of her life no urine entered the bladder. Her bowels were once or twice freely evacuated, but farther than this no active treatment was thought to be indicated. She could be roused to intelligence till within twenty-four hours of death. At the autopsy, both kidneys were found swollen, with evidence of recent and extreme inflammation. There was no positive sign of preëxisting disease. The other organs were healthy.

Dr. Reynolds regretted that bleeding, local and general, had not been employed, though admitting the doubt as to adequate relief being thus obtained. He urged the great importance of so managing such patients as to prevent the will being roused to resistance, believing that this often precipitated a convulsion.

March 13th.—*Variolous Roseola.*—Dr. Abbot said that he had recently seen a case of this rare eruption. It was preceded by the febrile symptoms and characteristic pain in the back which usually usher in an attack of smallpox. As the patient, a lad 16 years old, had slept for the previous week with his brother, who had recently had a mild attack of varioloid, careful search was made for any true variolous papules. Two only could be made out. They were upon the face, and were exceedingly small. The roseola appeared first on the trunk and on the right buttock and thigh, covering an irregular surface of perhaps a foot in length. It was perfectly characterized, con-

sisting of elevated, sharply-defined papules, more or less coalescent, of a rather dark red color. Had there been no suspicion of varioloid, it would have been regarded as a typical case of roseola. It is worthy of remark that the patient had been subject from infancy to occasional attacks of roseola. On the second day there was a fuller development of this eruption, together with an appearance of four more papules of varioloid on the forehead and face. These were all abortive, subsiding without becoming pustules. The general symptoms disappeared on the coming out of the roseola, and this subsided in three or four days. Dr. Abbot thought this case of special interest at the present time, on account of the prevalence of variolous disease, that physicians might be put on their guard if called to attend similar cases.

March 13th.—*Fœtal Heart heard in an unusual Situation.*—Dr. Abbot said that he had recently heard the fœtal heart in an unusual situation. The woman in whom it was heard had been eight years married without previous pregnancy, and applied for a diagnosis of her condition. The catamenia had been absent for a little more than six months. The abdomen presented the usual fulness of pregnancy of that period, but the fœtal heart could not be detected in the usual place. After very prolonged and careful examination, it was heard distinctly in the median line, three inches and a half above the umbilicus, about half way between it and the ensiform cartilage, over a surface of about two inches in diameter. It could not be heard at any other point. The outline of the abdomen at its upper part made it probable that the child was lying transversely across the upper part of the uterus.

March 13th.—*Remarkable Human Skull.*—Dr White exhibited a human skull recently removed from a burial mound near Stockton, California. It presented some remarkable anatomical points, and was evidently of a very degraded type. The frontal region was exceedingly low and narrow, and the supra-ciliary ridges massive and prominent. The zygomatic arches were very wide, and projected half an inch or more when the skull was held vertically at arm's length. The parietal and occipital regions were bulging and capacious, so that the internal capacity was 82 cubic inches. The cranium was perfectly symmetrical and had never been distorted by artificial compression, although the forehead was more retreating than skulls flattened by design. Another cranium was brought from the same mound, which, although of the female sex, presented the same general characters. Both specimens resembled the Digger type more than any other of the native races, but were even more degraded than this low tribe.

March 13th.—*Hereditary Syphilis.*—Dr. Williams asked the attention of the Society to a boy of 12 years affected with the peculiar form of interstitial inflammation of the cornea which is a consequence of inherited syphilis. The notched edge of the incisors, and dwarfed, peg-shaped aspect of the molars, with the broad and sunken bridge of the nose, thick lips, and sallow and pitted skin, so well described by Mr. Hutchinson, of London, as constituting the peculiar physiognomy of congenital syphilitic affection as observed after the period of second dentition, were well marked in this case. The treatment had consisted in the use of hydrarg. c. cretâ, combined with tonics, under which the opacity of the cornea was diminishing and vision improved.

March 13th.—*Extraordinary Voluntary Power over the Muscles of the Eyeball.*—Dr. Williams also exhibited a middle-aged man who had gradually acquired an extraordinary voluntary power over the muscles of the eyeball; so that he could rotate the eyes to and fro, in any direction, with astonishing rapidity. He had commenced these movements at eight years of age, and had obtained increased control over the muscles year by year by frequent exercise.

March 13th.—*Treatment of Acute Tonsillitis with solid Nitrate of Silver and Incisions.*—Dr. Parks said that he had been for a number of years in the habit of treating acute tonsillitis, when seen early, by applying solid nitrate of silver all over the inflamed surface. When the appearances indicate much engorgement, he also lances the gland, to the depth of half an inch, in one, two, or three places. Neither operation is so painful as might be expected. The relief which has followed, even in severe cases, has been so great, and so speedy, that he could but attribute it to the treatment. The past winter, a lady consulted him for this affection, in whom the symptoms had been present some thirty-six hours. The pulse was high, the skin hot, the countenance heavy and distressed. There were pains in the back and elsewhere; thirst, and anorexia. Swallowing was excessively painful. Both tonsils, as also the anterior pillars, were much swollen, dark red, and angry looking. The application of nitrate of silver, and also incisions, were resorted to. This was on Thursday. Friday, nitrate of silver was again applied, the symptoms being mitigated. Saturday, the patient was convalescent, when Dr. P. made his last visit. The succeeding Wednesday, the patient went into the country to visit friends. During the preceding winter, Dr. Parks had treated the same patient for this affection with similar results, and much to her surprise, as she had been long subject to occasional attacks, and never before had been convalescent under three weeks, often being ill with them longer than that. Dr. P. said it might be argued that the inflammation in these last two attacks was predestined to rapid resolution, and would have occurred without treatment. But this was only one of many similar instances, and he remembered no case of failure. He recollected one patient in particular, who said his attacks of tonsillitis usually (or always) terminated in suppuration; and in whom abscess was strongly threatened, but did not occur, free cauterization and lancing having been used. About the time he commenced this method of treatment, some years ago, he saw in the *Union Médicale* a mention of favorable results from the application of solid nitrate of silver to acutely inflamed tonsils.

Northern Dispensary, New York.—Twenty-six thousand one hundred and twenty-six patients have been treated during the year by the Northern Dispensary, in the city of New York, of whom 19,916 were cured or relieved, 96 have died, and the remainder have been sent to the hospital, discharged as improper objects, or are still under treatment. The number of prescriptions dispensed was 33,053. The receipts of the institution were $6630·31, and there is a balance on hand of $417·06.—*Med. and Surg. Reporter.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, MAY 4, 1865.

SUDDEN DEATH IN LABOR.—We have received two communications with reference to the case of sudden death in labor reported and commented on in the JOURNAL of the 20th ult. We have only room to notice the first this week. It is from Dr. Johnson Gardner, of Providence, R. I., as follows:—

MESSRS EDITORS,—I have read with much interest the extraordinary case you have been pleased to publish of "Sudden Death in Labor," reported by Dr. Case, of Chicago. There can be no doubt, I think, that the opinion you have given, at the solicitation of Dr. Case, as to the probable cause of this death in parturition (alike rare and unexpected, as it was instantaneous) is the most rational and philosophical that can be adduced. From what I have several times witnessed in practice, I can well conceive that powerful uterine action, so sudden as to produce congestion of the brain, immediately after the rupture of the membranes, might cause this sad result. But it never has, and I trust never will be my lot to have charge of such a case. It is suggestive of many thoughts to the reflecting accoucheur. If it be true that "physicians *generally* break the membranes as soon as the mouth of the womb is properly dilated, and the liquor amnii comes away more gradually"; and if the cause of the fatal result in this case was, as you have, I think, correctly suggested, is it not an argument in favor of giving more and increased attention as to when the proper time arrives for this artificial interference? Or, in other words, should the physician in ordinary and natural labor break the membranes? This is a question about which I confess I have had much doubt and perplexity.

Dr. Capron, now enjoying an extensive obstetric practice, and myself were both students with the late Dr. Levi Wheaton, of this city, at the same period—during the years 1823, 4, 5, now 40 years ago; since which we have kept up a professional intimacy. At one of our interviews, not more than a year since, the Doctor mentioned to me that he was in the habit of rupturing the membranes as a means of expediting labor. On this account I have of late, in some cases, been induced to adopt this course for a similar reason. But I have recently been so often disappointed, and have found it so frequently to *retard* rather than *expedite* labor, that, as a general rule, I have now abandoned it. I have, therefore, come to agree fully with Dr. Ramsbotham (page 128), where he says:—"It is desirable in practice to preserve the membranous bag entire as long as possible; or, at least, until it has performed the whole office assigned to it by nature—viz., the dilatation of the os uteri, the vagina, and somewhat of the external parts. When the membranes appear externally to the vulva, indeed, we may suppose that they have then effected all the good that can be expected of them; that their remaining entire may possibly be retarding the labor; and we may, in that case, venture to rupture

them, provided the head present. But it is one of the first axioms to be learned in obstetric practice, not officiously or unnecessarily to destroy the cyst so long as any advantage can be gained from its dilating powers."

We believe that in reality there is no difference of opinion between Dr. Gardner and ourselves on this subject. Of course, so long as the membranes, if left intact, are aiding the process of labor, they should not be ruptured. In saying that "physicians generally break the membranes as soon as the mouth of the womb is properly dilated," &c., thus preventing the explosive rupture referred to, we stated what we believed to be the common practice by the best practitioners, and in accordance with the highest obstetrical authority. All will agree with Dr. Ramsbotham that there should be no delay in doing this when the membranous bag has "performed the whole office assigned to it by nature," although we doubt if all or the majority will think it necessary to wait until the external parts are distended by it. In truth, this is a case calling for good judgment on the part of the practitioner, such as we are happy to believe belongs to the profession generally. Given a well-dilated and yielding os, a bag of membranes firmly distended and protruding into the vagina at every pain, why delay the evident assistance which rupturing the membranes must give? Is it not evident that just so much force as is expended by the uterus against the resistance of the membranes is just so much expulsive force wasted and so much time lost? True, it may be that sometimes labor may seem to be temporarily retarded; but this delay is only apparent, and is caused by the uterine contractions acting at first upon the liquor amnii and causing it to escape to some extent before they are fully brought to bear upon the fœtus itself. Let us not be misunderstood. We do not advocate the rupture so early as to cause the escape of *all* the liquor amnii before the head is fairly at the brim of the pelvis, thus exposing the child to the dangers of a "dry" labor, but only when there is no apparent obstacle to its progress. Under these circumstances a certain amount of the waters will at first pass off, and there will be sometimes a temporary cessation of the violent pains, merely because the resistance caused by the membranes has been removed and a part of the uterine contents escapes without much effort on the part of that organ. These contractions, however, will not empty the uterus wholly before the head is so engaged as to shut up the os sufficiently to prevent this dangerous condition. The whole question may be simply stated thus:—Is there reason to believe at any stage of labor that the resistance of the membranes is retarding the process? If it is, they should certainly be ruptured. Neither should the danger of allowing the uterus to exhaust itself against a tough bag of waters be lost sight of. It is laid down, we believe, by all the principal writers on obstetrics, and it commends itself to reason and common sense, that the very abrupt and sudden delivery which may then occur is very apt to be followed by uterine atony and post-partum hæmorrhage. *Naturâ duce* is the best guide for the intelligent physician in this as in all other cases.

Without making any extended search, turning to the authorities at our elbow, we find that Dewees says on this subject:—

"Should the pains be efficient, and the os uteri well dilated, or

even easily dilatable, and the membranes entire, let them be ruptured by the pressure of the finger against them, or, by cutting them with the nail of the introduced finger. We are well aware that this direction is very far from being in conformity with the opinions of writers upon this subject; but we are sure we have not adopted it upon slight grounds; nor proposed it because it might quadrate with preconceived notions. In directing it, we are certain that experience is altogether in its favor. And this should be done for the following reasons: first, because, when the mouth of the uterus is dilated, or even easily dilatable, the membranes have performed every duty they can perform; secondly, that very often the advancement of the presenting part is retarded by the strength of the membranes, and the labor much protracted by it; thirdly, that very frequently the pains are increased both in force and frequency, and the labor much abridged by it; fourthly, it gives much greater security to the woman after delivery, by permitting the tonic contraction to take place before it is accomplished, and thus ensuring a more speedy delivery of the placenta, and also very much lessening the risk of after-hæmorrhage."

Blundell says:—"If, however, the os uteri be wide open, and the membranes, pushing down along the vagina towards the external parts, have not given way, then rupture them; for, no longer of service in dilating the passages, they may retard the birth; or, should the laxity of the parts, or the capacity of the pelvis, allow of their transmission entire, floodings fatal to the mother and destructive to the fœtus may be the result."

Caseaux says:—"It is very certain that, when the uterine orifice is entirely dilated, when the membranes are forced into the vagina by a large quantity of fluid, and the head is movable, but still the contractions do not produce a spontaneous rupture of the membranes, it is evident, we repeat, that they, by their resistance, prolong the labor. Although this obstacle is never insurmountable by the efforts of nature alone, yet the delay in the delivery and the dragging on the membranes may be attended with some inconveniences, and it is, therefore, better to lacerate them."

Bedford, while stating that, as a general rule, spontaneous rupture of the membranes takes place as soon as the os is sufficiently dilated for the head to pass, advocates the essential necessity of rupturing the bag of waters when the labor is very rapid, and there is apprehension of too sudden an expulsion of the fœtus and its appendages. He says, "*you should, as a general rule, regard quick births as dangerous births.*"

We must defer to another occasion our notice of another communication on this interesting case.

Spasmodic Asthma—Value of Medical Journals. *Messrs. Editors,*—Some ten years ago, in conversing with a member of the medical profession whose success in the healing art had been below the average, he very positively and somewhat proudly affirmed that he had never subscribed for nor habitually read any medical journal. With some surprise, I inquired his reasons for ignoring such valuable means for acquiring useful information. He replied: "Medical journals are a humbug. One week there is one specific, and the next week another

discovered and blazoned forth to the medical world, but at the end of a few months they are forgotten and no one any the better for them."

Now there may be some *little* truth in this wholesale assertion, but it is mostly false. It has often seemed to me during the fourteen years that I have been in the profession, that the medical journal has providentially come to me *just in the right time*, with some wise suggestion that has smoothed the way and aided me materially in giving help to those whose lives were in my hands, so to speak. One instance I will relate. Spasmodic asthma used to be a terror to me. I had tried so many remedies and failed, that I had almost concluded that it would run its course in spite of stimulants, sedatives, anodynes, &c. Some time in January or February of a year ago, I was called to see Mrs. H. She had been awake and suffering with spasmodic asthma all night; was in the seventh month of pregnancy, which did not help the matter much. Said that she had suffered terribly with it a year before; was then visited by Prof. R., one of our most skilful physicians, but it was three days before she could get relief. It was the *first call* to that house, and I felt as though the prospect of relief was small. A few days previous I had read an article in the JOURNAL recommending hot brandy. I ordered her to take an ounce and a half in water, as *hot as she could drink it.* The second dose ended the asthma, and she went to bed and slept soundly. A number of times since I have prescribed it in similar cases with the same results. Believing it to be the duty of a physician to give the profession the benefit of his experience in any new method he may have found out in the treatment of disease that is successful, in a future article I will say something about the internal use of chloroform in convulsions of infants.

M. WENDELL CASE, M.D.

Chicago, April 24th, 1865.

MESSRS. EDITORS,—At the annual meeting of the Middlesex South District Medical Society, the following officers were elected:—*President*, Enos Hoyt. *Vice President*, Anson Hooker. *Secretary*, J. T. G. Nichols. *Treasurer*, B. F. D. Adams. *Supervisors*, L. E. Partridge, J. Pratt, H. Holmes. *Censors*, C. H. Allen, A. Hosmer, H. H. Pillsbury. *Commissioner on Trials*, W. W. Wellington. *Councillors*, H. Bigelow, H. Cowles, J. C. Dow, R. L. Hodgdon, A. P. Hooker, W. B. Morris, J. T. G. Nichols, J. L. Sullivan, J. E. Tyler, R. S. Warren, M. Wyman. *Delegates to the American Medical Association*, Josiah Bartlett, H. Bigelow, H. Cowles, A. Hosmer, Anson Hooker, Samuel Richardson, J. F. Wakefield, R. S. Warren, W. W. Wellington, M. Wyman.

J. T. G. NICHOLS, *Sec.*

Cambridge, April 27th, 1865.

TYPHUS FEVER.—This disease in its most malignant form has for a number of months been epidemic in Scotland and Ireland. At Dundee, Aberdeen, Falkirk, Glasgow, Greenock, Dublin, Cork, it has carried off hundreds, among them, we regret to say, not a few of our own profession, who contracted the disease in the course of their professional duties. As the approaching season will doubtless see a number of emigrants reaching our shores, sailing from the Clyde and Irish

ports, where the disease is now prevailing, we trust our authorities at quarantine will examine closely all vessels coming from any affected port. If the disease was to become prevalent with us, during our hot summer weather, which will soon be upon us, we would have great cause to lament our want of forethought. Prevention is better than cure.—*Canada Medical Journal.*

Anæsthesia by Chemically pure Ether.—MM. Regnauld and Advian, pharmaceutists, laid before the Imperial Academy of Medicine, Dec. 27, 1864, a work on the method of obtaining chemically pure sulphuric acid. M. Gosselin stated that at the request of MM. R. and A. he had tried their pure sulphuric ether, and found its effects far more rapid and certain than that of ordinary ether, and that the period of excitement did not occurr. Four to eight minutes sufficed for the production of complete anæsthesia, and as death had been produced in a certain number of cases from the inhalation of chloroform, whilst none had resulted from ether, he thought the latter should be preferred to the former.—*Medical News*, from *Révue de Thérapeutique Méd.-Chir.*, Jan. 15th, 1865.

Death of a Surgeon from Chloroform.—An inquest has been held at Newcastle on the body of Mr. Christopher Coates Lynn, M.R.C.S., of Newcastle-upon-Tyne, who was in good practice in that place. Mr. l'Anson, who was called in to see the deceased, said that he had on two former occasions inhaled chloroform, but could not say for what purpose. There was nothing else to account for death, nor was there any reason to suppose it was taken with the intention of committing suicide. The jury returned a verdict that the deceased had died from the effects of chloroform administered by himself in error.—*London Lancet.*

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, April 29th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	42	51	93
Ave. mortality of corresponding weeks for ten years, 1853—1863,	38.9	42.0	80.9
Average corrected to increased population - - - - -	00	00	89.77
Death of persons above 90 - - - - - - - - -	0	0	0

We have received a communication on two cases of Tænia Solium, from Dr. Francis C. Ropes, and one on Tubercular Peritonitis, from Dr. W. H. Triplett, which will receive speedy publication.

Died,—In New York city, April 26th, Dr. Valentine Mott, in his 80th year.

Deaths in Boston for the week ending Saturday noon, April 29th, 93. Males, 42—Females, 51. Accident, 2—apoplexy, 1—inflammation of the bowels, 4—congestion of the brain, 2—disease of the brain, 3—bronchitis, 3—cancer, 1—cholera infantum, 1—consumption, 23—convulsions, 2—croup, 1—diphtheria, 1—dropsy of the brain, 4—drowned, 2—erysipelas, 1—scarlet fever, 1—typhoid fever, 4—disease of the heart, 2—infantile disease, 4—inflammation of the lungs, 7—marasmus, 1—paralysis, 1—peritonitis, 2—pleurisy, 1—puerperal disease, 2—purpura hæmorrhagica, 1—scrofula, 1—smallpox, 2—suicide, 2—syphilis, 2—unknown, 8—dysentery, 1—whooping cough, 1.

Under 5 years of age, 36—between 5 and 20 years, 6—between 20 and 40 years, 25—between 40 and 60 years, 18—above 60 years, 8. Born in the United States, 62—Ireland, 28—other places, 3.

THE

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PULMONARY TUBERCULOSIS.—A REVIEW.*

[Communicated for the Boston Medical and Surgical Journal.]

THERE is no living physician to whom the medical profession really owes more than it does to Dr. Horace Green, for the knowledge it now possesses of various diseases of the throat, previously too often neglected, but which now, thanks chiefly to Dr. Green, are successfully treated. We speak advisedly when we say that many coughs were formerly allowed to continue for years, sources of great mental and bodily distress, but which are now treated and speedily cured by topical remedies as recommended by Dr. Green. We do not mean that he was the first to make these local applications, but he was the first to enforce upon an unbelieving community the propriety of thoroughly examining and of treating by topical remedies all parts of the throat. Doubtless others before him had touched the vocal cords; but he has compelled us to believe that it was not only possible to touch them without the least trouble, but likewise that it is possible and at times useful to pass *through* them with a sponge probang filled with a strong solution of nitrate of silver. Even the possibility of thrusting the probang deep into the trachea is, we believe, now an accepted fact among most if not all of those who have examined the subject. We have all heard of "catheterism of the bronchi," and of the injection of fluids into the tubes. Many of us, however, doubt the propriety of it, compared with other apparently less dangerous means. We have all heard of its possible danger. And yet the present volume is really intended to urge this method upon the notice of the profession, and to claim for it the highest value—viz., as being a prominent means for curing consumption. In order to let our readers know, as clearly as we may, the amount

* A Practical Treatise on Pulmonary Tuberculosis; embracing its History, Pathology and Treatment. By HORACE GREEN, M.D., LL.D., late President and Emeritus Professor of the Theory and Practice of Medicine in the New York Medical College, Corresponding Fellow of the London Medical Society, &c. &c. New York: John Wiley. 1864.

of proof which Dr. G. gives us for this view of the subject, we propose to analyze the volume with some detail.

It confirms all Dr. Green has previously written upon the value of local treatment in all coughs arising from any throat complaint. In fact, while reading the greater portion of the latter half of the volume one is constantly reminded of the author's previous writings, and the object of the present work *seems* almost lost sight of. But if Dr. Green be right in his theory of the origin of tubercular consumption and in his new method of treatment, the last few pages far transcend in importance anything previously written by Dr. G. or by any one else upon the treatment of tuberculosis. If Dr. G. can sustain his propositions, we are on the eve of the greatest improvements in the therapeutics of this disease offered to us in modern times. For he claims that by his method we can frequently prevent tubercles developing in the lungs, and that even incipient phthisis is often amenable to treatment, and that physical signs, such as râles under the clavicles, &c., will disappear. These are high claims. They are possible, we have no doubt, for we are by no means among the sceptics who deny that tubercles can be cured. We have seen cavities cured, and we presume all auscultators have met with similar cases, and this without using any of the special remedies employed by Dr. Green.

With these prefatory remarks, we proceed to the promised analysis of the volume.

It is an octavo of 356 pages, 116 of which, or Part I., are taken up with an historical sketch of the opinions of the profession, from Hippocrates to the present time, upon the nature and treatment of pulmonary consumption. In this *résumé* Dr. Green has neglected to refer to all modern writers, such as Boudin, Mühry, &c., upon the geographical distribution of the disease, and yet this very cause —viz., locality—seems to be one of the most important in its etiology. The object Dr. Green had in view in making this sketch may be judged from the following remarks, page 117, at the commencement of Part II.:—"If now we institute a critical analysis of the views advocated by the different authors whose works we have been considering in the preceding pages, we shall find that much the greater part of them may in truth be regarded as humoro-pathologists, inasmuch as a majority of all the later writers on tubercular phthisis consider the disease as having its origin in a permanent dyscrasia, or a derangement in the constitution of the blood."

And page 118, Dr. G. writes:—"I propose to go back of all this, and to show that the blood itself is not the real and primary seat of the tuberculous dyscrasia."

To prove this, and the treatment naturally connected with it, is the object of the volume.

In order to prosecute the inquiry intelligently, Dr. Green feels compelled to go back to the "cells or elementary organs of animal

tissues," and he gives the cell theory and microscopic views of normal cells, and concludes with the following remark:—"If, then, histologists are enabled to trace all vital forces to the elementary organs, and to find independent life in each primordial cell, why may we not look for the first morphological change in diseased action, *in the individual cell, or even in the molecular contents of the cell itself?*" Dr. Green thus italicizes the part on which he is to rest his own theory.

Chapter II. contains histological inquiries into the structure of the oral cavity, larynx, trachea and lungs. He finds, among other things, many "glandules," "lymphatic vessels." The lungs, in fact, in their vesicles, correspond to the smallest lobules of "racemose glands." But the lymphatic vessels are very numerous in all these parts. Hence Dr. Green studies them and the lymph contained therein. But the "lymph, whilst it conveys certain substances from the tissues to the blood, brings along with it, at the same time, the corpuscular elements, out of which the blood-cells continually recruit their numbers." P. 143.

Dr. G. then refers to pathologists "who have regarded consumption as being in some way connected with changes in the quality of the fluid of the lymphatic vessels." And he quotes Virchow, apparently to prove his own (Dr. G.'s) particular views, as saying:—"If we compare the abnormal cells of the tubercle granules with some of the normal tissues of the body, we may observe the most complete correspondence between tubercle corpuscles and the corpuscles of the lymphatic glands."

Two remarks may be made upon the above quotations. Dr. Green quotes the opinions of all the physicians for centuries back as to what they *think;* but till they *prove* their propositions, their opinions have little weight in deciding the important discussions raised by Dr. G. In regard to Virchow, his grand idea is that he found nothing in disease that cannot be found, in a modified shape perhaps, in health. If Virchow's opinion be true, and the corpuscles of the lymphatic glands correspond entirely with tubercle corpuscles, and the form of a cell alones decides its malignant or non-malignant character, why are we not all tuberculous? They may correspond in aspect, but evidently there is *something* added, the *essential* qualities of which we cannot at present determine.

Chapter III. In this chapter the author endeavors to establish the following important theses:—

"*First*, That in most cases of chronic phthisis there are present *preliminary manifestations;* or, in other words, that *a primary pathological condition of certain portions of the tissue system exists*, which is sufficiently obvious to enable the practitioner to detect the approach of the disease it foreshadows, before the occurrence of any tuberculous deposit in the lungs.

"*Second*, That this inceptive pathological state, occurring in indi-

viduals having no hereditary taint, constitutes, ultimately, if persistent, the primary development of a scrofulous diathesis, which diathesis may thus become permanently established, and therefore be hereditarily transmitted to others.

"*Third*, That being early possessed of the knowledge referred to in the first proposition, *the physician has it in his power, by the employment of known therapeutical measures, to arrest, in many cases, the further progress of the morbid action*, and thereby to avert the fatal tendency of the disease.

"It is many years since the celebrated Abernethy published to the world his treatise 'On the Constitutional Origin of Local Disease.' His views have been pronounced enlightened and philosophical, and perhaps justly so. Certainly they were eminently suggestive, for they contributed more than those of any other writer of that period, to awaken among both surgeons and physicians a spirit of enlightened inquiry with regard to primary diseased action. But the time has arrived when the great work, needed by both branches of the profession more than that of any other, and which perhaps might be termed the converse of that of Mr. Abernethy, is one which shall embrace a full, enlightened, and philosophical history of the 'Local Origin of Constitutional Diseases.'"

Chapter IV. commences with the following, from Virchow:—

"Proposition I.—'As a continuous ingestion of injurious articles of food is capable of producing a permanently faulty composition of the blood, in like manner persistent disease in a definite organ is able to furnish the blood with a continual supply of morbid materials.'—Virchow."

Dr. Green then proceeds to say that "for fifteen years he has called the attention of the profession to the marked local morbid processes of certain tissues and organs, and to the chronic dyscrasia effected by their persistence."

"During several of the first years of my practice in this disease, I, in common with most modern pathologists, regarded tuberculosis strictly as a blood disorder, and phthisis as a local manifestation of such morbid condition of the blood. I still believe that this dyscrasic condition of the liquor sanguinis is present in consumption, after careful observations, made during many years of practice, in the treatment of many thousand cases of phthisis. I have had the conviction forced upon me, however, that the pathological change in the blood, which is characteristic of tuberculosis, does not have its origin in the liquor sanguinis itself, but that *the blood receives its contamination primarily from definite tissue elements, capable, from pre-existing local disease, of furnishing this fluid with a continual supply of morbid materials*; and of establishing, ultimately, that tubercular dyscrasia of the system denominated 'strumous diathesis,' or tuberculous constitution, or predisposition of the older pathologists."

He then alludes to the glandules in the tonsils, &c., of the throat, and declares that to them we are to look for the initial lesion in chronic tuberculosis (p. 152). This is Dr. Green's belief, but we

have as yet no proof of this being other than pure theory on his part. He then enters into a description of the changes that take place in the glandules; they become hypertrophied, "cloudy," and degenerated, and the follicles sometimes burst, but generally they discharge their contents upon the adjacent mucous membrane (page 156). Hence "diseased action is communicated from one follicle to another, until at length the glandulous structures, found studding the lining membrane of the larynx and trachea, are affected; and in many cases those even of the entire bronchial tubes become involved in the diseased action" (page 157). All this seems to us pure theory, for neither morbid anatomy nor clinical medicine convince us that the facts are as stated.

But on this hypothesis, for as yet we can call it nothing else, Dr. Green proceeds further and says (p. 157):—"If, under these circumstances, the patient has been born of phthisical parents, or if he possesses in any degree hereditary tendency to the affection, an acquired tendency thereto, or other favoring circumstances are present, tuberculous disease of the lungs is quite sure to be developed early." In certain other cases, viz., in those not predisposed to phthisis, only the strumous diathesis is found capable of transmitting phthisis.

On page 159, Dr. Green, as a matter of *proof*, says that, "having watched many cases," he is fully satisfied (but we are afraid he does not carry conviction to the reader) this is the way the tuberculous dyscrasia is developed in many persons and in families.

"It is in this way, we believe, that the process begins, and is perpetuated, by which the liquor sanguinis is furnished with a *continual supply of morbid materials*, and that dyscrasia is finally established which pathologists style the tuberculous constitution, or scrofulous diathesis—a dyscrasia, I repeat, not dependent upon a contamination originating in the blood, but one which, so far as this fluid is concerned, is secondary, and derived from definite points, in tissues or organs more or less remote."

Chapter V.—"Nature and progress of the tuberculous dyscrasia." It has its origin in the cellular elements of tissues (p. 162). As far as we can understand this Chapter, Dr. Green claims that, having this origin, the tuberculous dyscrasia is produced in two ways, viz., 1st, by any contamination of the blood by those morbid cellular elements conveyed by lymphatics or bloodvessels; 2d, by *contiguity*, if we may use the expression, as cancer gradually extends to glands adjacent to it. All this is stated as his belief; we see as yet no proof.

Chapter VI.—"Early symptoms of chronic phthisis, or tubercular dyscrasia." The steps of this morbid process are as follows. And here we have a repetition of what we have already given, that there is a "proliferation" or "disintegration" of cells from the nose, pharynx and tonsils; thence to the bronchi, and finally to the cells

of the lungs—the tubercular infiltration of Laennec. "There is also a chronic tuberculous dyscrasia of the blood" caused by this long supply of morbid material.

Dr. Green then gives the usual "earliest symptoms of tubercular phthisis, and because cough, &c., without any or but trivial physical signs, exists, Dr. G. assures us they are signs *almost* precisely what we generally find to be present in the forming stages of the follicular degeneration." We presume he wishes us to take these two conditions as one and the same; but our experience does not agree with his. In a vast majority of cases the physician, when consulted, will be able to distinguish the two. In our own experience, the types of the two diseases, viz., those of merely throat disease and those of tuberculosis, though difficult of description and not called for in our present discussion, are usually sufficiently clear. We cannot, therefore, follow Dr. G. in the inferences to which he would lead us in the following, although we may agree with him in his general statement of symptoms. Because one fact in medicine is obscure there is no reason for attaching by pure theory alone another obscure fact upon it, and thereupon building up a system of heroic treatment.

"I have referred to these early symptoms of chronic phthisis—admitted to be such by most pathologists—for the purpose of showing that they are almost precisely those that we generally find to be present in the forming stage of that follicular degeneration of which we are treating. All our best and most experienced writers on the symptomatology of consumption, therefore, are agreed in this, that the approach of this fearful malady is often so silent and insidious that the detection of the disease, in its forming stage, is frequently attended with the greatest difficulty, whilst there is no other in which early detection is of more importance. But we have declared, in our first proposition, that in most cases of chronic phthisis there are present preliminary manifestations which are sufficiently obvious to enable the practitioner to detect the approach of this disease *before* the occurrence of any tubercular deposit in the parenchyma of the lung; and consequently to enable him, in a large proportion of cases, to avert the deplorable result."

Chapter VII.—"Primary symptoms of tuberculosis." Dr. G., in this chapter, again states boldly his views:—

"In my work on 'Diseases of the Air-Passages,' under the head of Follicular Disease of the Pharyngo-Laryngeal Membrane, I have described briefly the primary symptoms which mark the commencement of deterioration in cellular elements of tissues and organs, the ultimate tendency of which is to establish, in the way which has been pointed out, the tubercular dyscrasia in the fluids of the system, and a deposit of a tubercular character in the lungs.

"This peculiar affection *invariably* commences in the glandulæ of the superior portion of the aerial membrane. In the nearly ten thousand cases which in the last twenty-five or thirty years have come under my notice, I have observed not a single instance in which the

evidences, if not in favor of, were against this declaration. With emphasis, then, would I repeat to the profession the assertion I have made, that the primary manifestation of this abnormity is not only sufficiently obvious to enable the practitioner to recognize its presence, but that the malady, in this its initial stage, is, in a large proportion of cases, positively amenable to appropriate therapeutic measures."

He also states the curious fact, that always the tonsil most diseased marks the lung that is most disorganized.

Our experience is not so extensive as that of our author, but if there be two facts of which, as it seems to us, we are equally convinced as Dr. G. is of his own views, they are these, viz., that very often signs of disease of the lungs themselves commence long before *any* symptoms of trouble in the throat occur; 2d, and still more certain are we that hoarseness, that specific sign of laryngeal disease, almost invariably *follows* and does not *precede* lung trouble.

Chapter VIII.—"Second stage. Ulcerations of the trachea, larynx, &c." There is nothing peculiar in this Chapter.

Chapter IX.—"Third, or tubercular stage." Dr. Green quotes Lawson as sustaining his views (p. 196), who says:—"It has occurred to me so frequently to observe the fact that all the precursory signs of impending consumption have been modified or removed by remedies applied to the throat, that I can no longer resist the conclusion, that the lesion in question is, in a certain class of cases, closely allied to local pulmonary disease."

Dr. Gibb is also quoted by Dr. Green. He and Dr. Lawson, and in fact every well-educated physician who has had any practice, has noticed the frequent alliance of throat trouble with pulmonary, and their mutual influence, but this is very different from agreeing with Dr. Green's views in regard to the special pathology of consumption. And to this end we feel obliged to arrive; for these two parts, occupying two hundred pages of the volume, have not presented to us any *positive proof* of the truth of Dr. Green's theory. We must confess that we would have preferred an exact record of fifty or a hundred cases of manifestly tuberculous disease, with physical signs given in detail, and the results of Dr. Green's mode of treatment. These would have been worth more than all the mere opinions of physicians from Hippocrates down to the present hour, or any illustration of the cell theory, and general arguments as to what ought to be. This is what Dr. G. thus far has not given us. We confess to a disappointment. But let us turn to Part III., and see if we cannot there obtain more light and more proof.

Part III. Chapter I.—"Treatment of the præ-tubercular stage of phthisis." We do not object, but many will, to the term "præ-tuberculosis," the objectors claiming that no case can be considered tubercular till tubercles are manifested by physical signs. In terms we should agree with Dr. Green, and must confess that we feel as confident as he is of saving life by treatment in this stage, only we

do not depend on Dr. G.'s special method as the *sine-qua-non* course necessary for a cure. Nay, more—our experience leads us to believe that in many cases no amount of local treatment of the throat will, at times, check a manifestly tubercular tending case, even when for months there is no evidence from physical signs of pulmonary disease.

Section I. is simply a statement that Dr. Green has quoted these authors "to show that there is present, among experienced and observant pathologists, a growing conviction that a most important connection exists not only between a morbid condition of the glandular structures 'of different portions of the mucous membranes of the air-passages and a tubercular dyscrasia,' but also between that morbid change to which we have alluded, in epithelial cells in the air-vesicles, and the repletion of these vesicles with *tubercle corpuscles.*"—(P. 201.) This statement is true, but nevertheless it seems to us it does not necessarily follow that these writers sustain Dr. Green in his peculiar view of the development of phthisis. We are not aware that any one of them agrees with our author.

Section II.—It is occupied with the history of one family having no hereditary tendency to tuberculosis. The mother, however, died at 82, after having had for years chronic catarrh in the nose and pharynx. Neither parents showed signs of tubercular disease. All the eight children showed "catarrhal irritation"; four (not five, as Dr. G. states in one part, but in his detail only shows 4) died of consumption, at the ages of 69, 58, 39 and 31. Of the others, two died of other diseases; one is still alive, having been the only one treated according to Dr. G.'s method. But Dr. G. "maintains" *if* the same treatment *had been pursued* in them their lives would "in all probability have been saved or prolonged"; but, unfortunately, he did not at that time know of the value of topical remedies. We beg pardon of Dr. Green, but his assertion of an opinion is no proof of a fact. The next generation showed the gravest results. The five (four?) children who died of tuberculosis had twenty-one children, fourteen of whom had "strumous constitutions," and nine of the fourteen died of tubercular disease in early life; the other five have unmistakable symptoms of scrofula. This account contains the gist of Dr. G.'s views. The grandmother has catarrh; hence her children have a strumous diathesis, and die late in life of consumption; the grandchildren are cut down more quickly of true consumption or scrofula. Dr. Green adds, that from his "book of recorded cases he could give a very large number of well-attested cases," but it is not his intention to cumber his work with "cases" only so far as to prove and illustrate the propositions he will announce. "Every physician of experience can recal cases, in his own practice, confirmatory of the views here adduced *with regard to the source and progress of the tuberculous dyscrasia* [Dr. Green's italics]; cases, we mean, where individuals have labored under the symptoms of *threat-*

ened phthisis, perhaps through many years, and whose children have died of consumption, and who themselves, after ten, fifteen, or even twenty years, have fallen at length victims to fully developed tubercular phthisis."

This has, of course, ever been the unqualified admission of the profession; but what does it prove for Dr. Green's peculiar views? Another defect is observable in his record of this family. Dr. Green does not let us know anything about the habits, professions, residences, &c., of the various members of the family thus quoted; much less has he told us anything about these matters in the "many other well-attested cases." Yet how much these facts, and many others that might be named, go towards the production of tubercular disease! We regret extremely that the reader will have to look in vain for these very "cases." When one proposes to modify and perhaps upset all the views of pathologists, abundant proof by a report of such well-recorded observations is absolutely necessary; otherwise the stubborn-fact men immediately begin to doubt the truth of even a well-constructed and perhaps true theory. Dr. Green, by neglecting this consideration, has placed his work thus far simply on the level of pure theory.

Chapter II.—Here we have the treatment given of lesions of the fossæ nasales, tonsillar glands, pyriform sinuses, epiglottis, larynx and trachea, including all the various affections generally treated upon by Dr. Green in his previous works. There are many valuable suggestions in these seventy-four pages. Dr. Green claims that all the various lesions named are only the primary lesions of the præ-tubercular stage of chronic phthisis. He gives 26 cases:—2 of disease of the fossæ nasales; 2 of the uvula; 7 of the tonsils; 2 of the pyriform sinuses; 6 of erosion of glottis; 7 of ulceration of mucous membrane, or of the glands of the epiglottis, œdematous condition.

Now we presume there is not a single physician in the land who will deny that all these lesions can often be relieved by local remedies, chiefly suggested by Dr. Green. Not a day passes that we do not thank that gentleman for the advantages we have gained from his precepts in all such. But if we appeal to his cases and analyze them, so as to learn their real bearing upon tubercular development, we find that of the twenty-six only four presented positive signs—crackling, &c., under the clavicles. In three the signs disappeared, but in one of these he is not sure of a perfect cure. In the fourth, a dulness about the clavicle still remains. But all were much improved. These physical signs disappeared after months of treatment, local and general, of the most active kind, including change of air in three of them.

Dr. Green remarks:—

"We are quite aware of the importance of not deciding too hastily, with regard to the permanent arrestment of disease, in cases in

which tuberculosis has been positively detected. But in the treatment of so large a number of instances, now amounting to many hundreds, in which positive indications, both physical and rational, have been diagnosticated, not only by myself, but also by experienced auscultators—cases which have for years since being treated, enjoyed perfect health, I do not hesitate to declare my firm conviction that, in many of these cases of incipient tuberculosis, dependent originally upon cellular degeneration, positive and permanent cures have been effected by the treatment I advocate. * * * *

"I could enumerate many hundreds of cases, which during the last twelve or fifteen years have been treated in a way to arrest the epithelial degeneration that originates in the cellular elements of the superior portion of the air-passages; and have thereby succeeded in preventing the full development of a general pathological dyscrasia—one that is sure to end in confirmed phthisis."

We frankly confess that such general assertions are insufficient in so important a discussion. We need very minutely examined and recorded cases, and a proof by such records, that Dr. Green succeeds in curing more than others by this method. All of us have seen physical signs disappear, and probably in thousands they have disappeared within the last fifty years, without any such local treatment. And the question really to be proved by Dr. Green is, that he saves more lives, or throws back the physical signs of tubercular disease of the lungs oftener, than others. A painful state of doubt remains, we must confess, upon this matter. Dr. Green deals a great deal with medical opinion and medical theory; but, we repeat, we want something more convincing than mere opinion, even of the ablest.

[To be continued.]

TWO CASES OF TÆNIA SOLIUM.

By Francis C. Ropes, A. A. Surgeon U. S. Army.

[Communicated for the Boston Medical and Surgical Journal.]

Case I.—H. R. W., a gentleman about 50 years of age, living near London, England, began to be troubled, in April, 1864, with diarrhœa, and griping pains in the abdomen; which were most severe after fasting. He soon noticed that portions of a worm were passed at stool, and also crawled out of the anus at other times, and were found adhering to the skin, clothes, &c. He consulted his regular medical attendant, who considered the case one of tænia, but was surprised that the portions of worm should have an independent vitality. It should be stated here that the separate joints, when kept in water in a phial, were found alive after 24 hours or more. It appears that this medical man showed a specimen of these joints, still alive, to one or two well-known London physicians, and that they had never before observed this condition. Patient was ordered about ℥ xv. of the oil of male fern, and passed in consequence about four feet of tænia. He was much relieved; but the symptoms re-

turned after a few weeks. In June, I was requested to see him. Having learned the history of the case, I prescribed ʒ ss. of the oil of male fern after fasting, followed by ʒ i. of castor oil. A portion of worm was expelled (I forget the exact length), with some relief to the symptoms. However, as no *cure* had been effected, I prescribed in a day or two, ʒ ss. more of the oil. At this time, I think, too great an interval (about 5 hours) was allowed to elapse between the administration of the anthelmintic and the cathartic; for only a few small portions of worm were passed, and, moreover, patient suffered considerably from headache and lassitude—due, possibly, to the failure of the castor oil to remove the oil of fern from the system. A few days having been allowed for the patient to recover from the effect of medicine, he was ordered, on June 16, to take no food whatever, after a light dinner, till further orders; and on June 17, at 5, A.M., ℞. Olei filicis maris, ♏xlv.; mucilaginis acaciæ, aquæ, aa ʒ i. M.; and at 6½, A.M., ℞. Olei ricini, ʒ i. In the course of the forenoon, patient had two stools, in which were found about 32 feet of tænia; and, after a careful search, the *head*, of which I made a microscopical preparation.

I saw this patient about three months afterwards, and he had then had no return of his malady. I may here state that this gentleman was not in the habit of eating pork, but was fond of rabbits, which are largely eaten in England.

Case II.—George B. Mead, about 25 years of age, private, Co. M, 3d Mass. Cavalry, was admitted into the U. S. General Hospital at Readville, Mass., on Feb. 22, 1865; having frequently passed portions of tape-worm during the previous four months, of which he showed me a specimen on admission. He had suffered from griping abdominal pains. He had been treated, not long before entrance, by a medical man, and passed about four feet of worm.

Feb. 23.—Ordered to take no food after to-day noon till further orders. Feb. 24, at 6, A.M., ℞. Olei filicis maris, ʒ i.; mucilaginis acaciæ, ʒ i. M.; and at 7½ A.M., ℞. Olei ricini, ʒ i. Had two stools in the course of the morning, in which were found about 25 feet of tænia, and after a careful and prolonged search, the *head*, which I have also preserved. Patient was considered cured; and at his request was returned in the afternoon to his company at Camp Meigs. I am disposed to consider the oil of male fern the most sure anthelmintic which we possess, in cases of tænia. I find, in looking over the works of a few well-known European authorities, that this has been by far more successful in their practice than anything else. I believe, however, that failure may occur, owing to want of attention to the best mode of administering the remedy, which should be given after about fifteen or twenty hours' fasting, and followed, in an hour or two, by a cathartic. Of course it is a great satisfaction to find the head; but this may readily escape notice, in consequence of its minuteness.

U. S. Gen. Hospital, Readville, Mass.

THE THERAPEUTIC AND PHYSIOLOGICAL ACTION OF DIGITALIS.

By William Murray, M.D., M.R.C.P. Lond., Physician to the Dispensary, and Lecturer on Physiology, &c., Newcastle-on-Tyne.

Few drugs have been the subject of more conflicting statements than digitalis, and yet there are none on whose action the Profession has more implicitly relied. The drug has a special action on three separate organs—the brain, the kidneys, and the heart; in proof of this, witness its decided action in delirium tremens, in dropsy, and in various forms of heart disease.

As the action of the medicine upon this latter organ seems to have been little understood, and is still scarcely established, although the observations of Dr. Handfield Jones and others have been well put forth, it therefore seems right to add any new facts or observations on the subject.

I have carefully observed from twenty to thirty cases of cardiac disease treated by digitalis, from which the following conclusions have been drawn; some of these will be quoted as very decided cases, showing the true action of the medicine. As the proposed explanation of the action of digitalis accords fully with the ingenious and well-supported theory put forth by Dr. Anstie in his work on "Stimulants and Narcotics," it may be well to say that he holds that all true stimulants tend to bring tissue action to its normal standard; that when such action is in excess a true stimulant will reduce it, and when below par will bring it to its proper level; he proposes "that the word stimulant be restricted to agents which, by their direct action, tend to rectify some deficient or too redundant natural action or tendency." I believe that the action of digitalis when properly investigated will confirm these views; and at the same time the investigation of its action will be materially assisted by bearing them in mind. I shall show—

1st. That digitalis will stimulate and strengthen a weak heart, and that the weaker the muscular tissue of the heart the safer will be the administration of the medicine.

2d. That in a hypertrophied heart it will fail to reduce the pulse either in frequency or strength, and in such cases will prove dangerous.

3d. That in a weak organ, acting because of its weakness with great rapidity, it will reduce the number of its contractions, and, as it were, strengthen or tone them down. To strengthen and quicken the action of a weak, slowly-acting heart, and to reduce the number of the rapid strokes of a feeble heart is, according to Dr. Anstie, to do the work of a true stimulant, bringing action up to the normal standard on the one hand, and reducing it to that level on the other.

I. The following case is one of many in which the remedy has removed irregularity and intermission of the pulse, has given power to the heart when exceedingly weak, and increased the rapidity of its action.

A lady, aged 50, had suffered for nine years from cardiac disease, and was in an extremity of suffering when I first saw her, having a very largely dilated and weak heart whose cavities were overladen with blood, and considerable disease of both aortic and mitral valves. A confused tumbling and heaving impulse was all that could be felt in the cardiac region, and feeble blowing murmurs supplanted the natural sounds of the organ. There was no pulse at the wrist, and the large vessels in the limbs had scarcely a pulsation in them.

A dropsy of the legs and belly was making fast progress, and the usual stimulants and diuretics had failed to give relief. Although thus pulseless and faint, with the heart in so weak and burthened a condition, I prescribed digitalis in doses of ten drops and upwards. In a day or two the organ began to beat more forcibly, the pulse came again at the wrist, the turbulent or confused action became replaced by a quiet, steady stroke, the breathing, before labored, became easy, and the dropsy began to disappear. In a week the patient was out of bed, and very shortly she so far recovered as to go about in her usual way. After this she lived for more than a year in comparative comfort and good health, when suddenly the organ again failed, and before digitalis could be administered she died.

I might add to this cases of aortic regurgitation, with dropsy; many cases in which both aortic and mitral orifices were diseased, with dilatation of the walls of the heart and a weak, irregular pulse at the wrist; cases of simple weakness of the organ, without appreciable disease; cases of dyspnœa from an emphysematous state of the lungs and sluggish pulmonary circulation—all of which were most decidedly benefited by digitalis. I would especially direct the attention of the profession to the use of the drug in cases of bronchitis depending on sluggish circulation, with weakness of the heart's action and emphysema of the lung.

I have alternated the use of digitalis with the strongest of our stimulants in some of these cases, and have been astonished at the superiority it possesses as a stimulant. From the observation of a few cases in which the drug has been given continuously for a lengthened period, I do not find anything like failure of the heart's action to occur under a month or six weeks, and then a few days of intermission will clear the way for a fresh course of the medicine. In dyspnœa the relief obtained is sometimes most marked. I remember a poor girl, with frightful disease of the mitral orifice, having to rest on almost every doorstep on her way to my house, who was so relieved by digitalis as to walk to and fro with ease. I do not think, after trying it in almost all the affections of the heart, that there is a single disease or condition of that organ *attended by weakness* in which it may not be given with safety and benefit.

II. The next condition to which I would refer is that of hypertrophy. In this my experience is not large; but in one uncompli-

cated case of hypertrophy of the left ventricle, without valvular disease, in a man who had an almost Herculean frame, digitalis was fairly and carefully tried. The heart's action in this case was rapid and at the same time very forcible; the digitalis not only failed to reduce this, but it caused an increase in the symptoms, and the patient almost fainted after trying it for one week, so that the medicine had to be changed to tinct. verat. virid., from which decided benefit was derived. I might say that a converse experiment was tried in a boy, with mitral disease and rapid action of the heart. Here tinct. veratr. virid. failed to give the relief which was most effectually derived from digitalis.

III. Lastly, as a cardiac stimulant, digitalis ought to reduce too great rapidity of action *when this depends on weakness.* In this respect the drug has been well tried, and almost universal testimony to its value has been given.

In inflammatory diseases, in fevers, in phthisis, it is acknowledged to reduce the rapid pulse. In one case of phthisis at present under my care, it does this, and most materially lowers the temperature of the body and relieves the daily hectic paroxysm. While, however, it checks the excessive rapidity of the heart's action, it does not, therefore, weaken its force; so that, as a true stimulant, it brings the organ down to a slower rate of action, but at the same time affords it more power to do its work.

Thus it appears that the *physiological* action of digitalis is that of a stimulant, in Dr. Anstie's sense of that term; and that in its *therapeutic* properties it is especially useful in cardiac weakness, whether that weakness be accompanied by extremely slow or extremely rapid action. Further, its physiological action as a stimulant may be explained by supposing that in the case of the slow heart it improves the molecular arrangement of the sarcous elements, or that it excites the nerve centres from which the nervous power of the heart is derived; and in the case of the weak but rapid heart, it acts by strengthening that regulating or restraining (vital) influence which, while maintaining the activity of the tissues at a normal rate, checks undue and riotous action in the same (Radcliffe). Lastly, let me say that as a diuretic it is at once the safest and best we possess, and the dose may vary from ten drops to half an ounce. This very day I have given nearly half an ounce in fifteen-drop doses every two hours to a child three years old, and by so doing have subdued a rapidly-developing general dropsy, which was threatening the little sufferer's life.

P. S.—In some cases of mitral regurgitation, accompanied by a loud, distinct murmur, I have felt satisfied that digitalis reduced the intensity of the murmur most decidedly, and in one case it seemed to disappear altogether.—*London Medical Times and Gazette.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, MAY 11, 1865.

The American Medical Association.—The sixth of June, the day appointed for the meeting of the National Association in Boston, is fast approaching, and all things now seem to combine to make the occasion one of unusual interest and complete success. The doubts which partly occupied the minds of some of us, as to the practicability of holding the meeting this year, while the storm of war still hung over the country, are dissipated in this new sunshine of peace, and our thoughts, no longer distracted by anxiety, can after four long years be again and for the first time wholly given to a consideration of our professional interests. Those who have so nobly represented us in the field, and who have not failed to sustain equally with our brave and victorious soldiers our national glory, are now returning, prepared to lay before us at that time the fresh results of their long labors, and it would be a lasting reproach to us did not the profession throughout the country make this the occasion of publicly expressing our appreciation of their services, and of giving them such a welcome back to our ranks as we know awaits the reception of the rest of our gallant army to its homes. To those, also, who were once so gladly met in these meetings, and who have as devotedly sacrificed themselves in the cause for which their people have so vainly fought, we extend, in the name of our national association and our common interests in science, a cordial invitation.

The committees, to which have been entrusted the preparations for the reception and entertainment of our guests, have nearly matured their plans, and have met with the most ready coöperation from State and city authorities and from all parties with whom they have communicated. The members of our profession will without doubt show the same willing spirit to assist the finance committee in its work when called upon, as we learn they will be during the coming week. From the entire unanimity in the profession, and the reputation which Boston possesses as a centre of scientific and educational interests, there can be no doubt as to the nature of the reception or the attractive character of the entertainment which this city will give the Association. There is, indeed, but a single suggestion which we can offer to the committee, and this has, perhaps, been already anticipated; it is that invitations should be sent to the whole medical staff of the army, through the proper channels, to be present. It remains now for the various societies and institutions of the country, through their delegates, and for the chairmen of the scientific committees, to give to the coming meeting its true character, and we trust that all, far and near, will do their utmost to make it, as it promises to be, the most important one in the history of the Association.

On Extract of Meat. By Prof. Von Liebig.—Since my investigations upon meat in the year 1847 (see these "Annals," lxii), I have constantly endeavored to promote the fabrication of extract of meat

according to the method described by me, in countries where beef is cheaper than it is with us.

Since the introduction of this extract of meat (which is not to be confounded with the so-called consommé or soup-tablets) into the Bavarian Pharmacopœia, its great efficacy in cases of disturbed nutrition, of impaired digestion, and of debility, has been practically confirmed, and it will perhaps suffice to give an idea of the extensive use made of the extract of meat as a remedy, to mention that in the court-pharmacy here nearly 5000 pounds weight of beef are annually employed for this object. It may be worthy of remark that a great part of this extract of meat in the Bavarian pharmacies is sold by retail—that is, without a physician's prescription—an indubitable proof that it has become a domestic remedy, to which those persons who have experienced its beneficial effects in the form of medicine resort spontaneously in similar derangements of health ; these are often very poor people, who are least inclined to spend money upon medicine, and whom the high price of this remedy (1 fl. 12 kr. per oz.) does not deter.

In the hospitals and infirmaries, in which it is well known that the good soup prepared there is only too often confiscated by the nurses and attendants, the prescribing physician will, by means of the extract of meat, be able to give his patients a soup, quite free from fat, and of any strength he may desire.

Parmentier and Proust have for many years most strongly recommended the extract of meat for use in the French army. "In the train of a regiment," says Parmentier, "the extract of meat supplies the severely wounded soldier with a remedy which, with a little wine, immediately restores his strength, enfeebled by great loss of blood, and places him in a position to bear being transported to the nearest camp-hospital."

"No more happy application," says Proust, "can be imagined. What more strengthening remedy, what more powerful panacea, than a dose of the genuine extract of meat dissolved in a glass of generous wine! The elaborate tit-bits of gastronomy are all for the spoiled children of wealth! Should we, then, have nothing in our field-hospitals for the unfortunate whom his destiny condemns to suffer for us a long death-struggle in the snow and mire of marshes?"

A pound of extract of meat is sufficient, when boiled with slices of bread, potatoes, and some salt, to afford a meat soup for 128 soldiers, such as is not to be had of equal strength in the best hotels. Coffee and tea, although invaluable in themselves, are in the end to be considered as only imperfect substitutes for the extract of meat. In fortresses and in the navy, where the men are thrown upon salt and smoked meat, the extract is the only means of supplying the important constituents which are removed from the meat in the process of salting, and of restoring to it the complete nutritive power of fresh meat; in like manner the employment of the extract of meat would be of the highest importance to travellers, and particularly to families in the country as well as in towns, especially in Germany, where soups are indispensable; in Germany meat would be eaten in very much greater plenty and better dressed, and the soup would be prepared from the extract, if the high price of the latter did not present a difficulty which with us is almost insuperable. * * * * * *

The following is Prof. Liebig's process for the preparation of the extract referred to at the beginning of this article :—

"From the above-described behavior, the best process for preparing, in the short space of a few minutes, the strongest and most aromatic soup, is at once evident, and any one can, by the simplest experiments, satisfy himself of the truth of Proust's statement, that the constituents of the soup, on which its taste and its other properties depend, exist ready formed in the meat, and are by no means the product of cooking.

"If one pound of lean beef, free from fat and bone, finely chopped as when used in sausages, be equally mixed with its own weight of cold water and slowly heated to the boiling point, the fluid being then, after boiling for some minutes, separated by expression through a napkin, from the coagulated albumen and from the fibrin which has become hard and horny, we obtain an equal weight of the most aromatic broth, such as cannot be obtained even by boiling for hours from a piece of meat. Mixed with some salt and the other adjuncts with which soup is seasoned, and colored somewhat darker with roasted onions or burnt sugar, this broth furnishes the best soup which can be prepared from a pound of meat. The influence which the (brownish) color of the soup exercises on the taste, in consequence of the ideas connected with the color, is easily proved. Soup colored with a little caramel (roasted sugar) has, in the opinion of all persons, a much stronger taste than the same soup when not colored, although the caramel, in fact, in no way enhances the taste.

"If we allow the meat to boil longer with the water, or evaporate the broth at a boiling temperature, it spontaneously acquires on concentration a brownish color and a delicate taste of roast meat. If we evaporate it to dryness in a water-bath, or, if possible, at a still lower temperature, we obtain a dark-brown, soft mass, of which half an ounce is sufficient to convert a pound of water, to which a little salt is added, into a strong and palatable soup.

"This extract of meat is not to be classed with the so-called soup or broth tablets prepared in England and France, for the latter are not made of meat, but consist of gelatin in a state of greater or less purity, which is distinguished from bone-glue only by its high price.

"From thirty-two pounds of lean beef, free from bone and fat (consisting of eight pounds of dry meat and twenty-four pounds of water), we obtain one pound of this extract, which, on account of its high price, can scarcely become an object of trade ; but if the experience of military surgeons agrees with that of Parmentier, according to which the 'dry extract of meat in the train of a corps, supplies the severely wounded soldier with a restorative, which, with a little wine, immediately raises his strength exhausted by great loss of blood, and enables him to bear being transported to the nearest hospital,'* it seems to me to be a pure matter of conscience to recommend Parmentier's and Proust's proposal to the attention of governments.

"Now, if the composition of this extract be somewhat more precisely known, any skilful apothecary can easily distinguish the genuine from the false preparation. Of the true extract of meat nearly 80 per cent. dissolve in spirit of wine 85 per cent., while rarely more

* See Proust, Annales de Chimie et Physique, 3d series, t. xviii., p. 177.

than from 4 to 5 per cent. of the ordinary soup tablets are dissolved by the same fluid. The amount of creatin and creatinin, which latter is immediately recognized in the spirituous solution by means of chloride of zinc, and the nature of the salts remaining after incineration, consisting principally of soluble phosphates, furnish sufficient resting points for estimating the goodness of the genuine extract.

"I consider this extract to be not less important for provisioning ships and fortresses, to preserve the health of the men in those cases where there is a want of fresh meat and vegetables, and where the men are dependent on salt meat.

"It is generally known that in salting meat the latter is rubbed and sprinkled with common salt, and that in the points where the meat and salt come in contact, a brine is formed, amounting to a third or to half of the fluid which formed a constituent of the fresh meat.

"I have found that this brine contains the principal constituents of a concentrated soup, that, therefore, in salting, the composition of the meat is altered, and in a still greater degree than occurs in cooking. In cooking, the highly nutritious albumen remains in a coagulated state in the meat, but in salting, albumen separates from the meat; from the brine when heated to the boiling point a quantity of albumen separates as a coagulum. The brine has an acid reaction; it gives, with ammonia, on the addition of a salt of magnesia, copious precipitate of ammoniaco-magnesian phosphate; it contains lactic acid, a large quantity of potash; and that it contains creatin, which I was unable to separate from the great excess of common salt, may be undoubtedly inferred from the amount of creatinin present. Thus, the brine neutralized with lime yields, after the crystallization of the common salt, a ley, from which, after some time, on the addition of alcohol and then of chloride of zinc, the double salt of creatinin, which I have already frequently mentioned, is deposited.

"Hence, it is quite clear that in salting meat, if the latter be rubbed so much that a brine is formed, a number of matters are withdrawn by the separation of the fluid of meat which are necessary to its constitution, and that in proportion to this loss its nutritive properties are impaired; if these constituents are not replaced from other sources, it is evident that a portion of the meat becomes a respiratory matter certainly not conducive to health. It is further certain that by salted meat, if its quantity be not increased, the health of an individual cannot be permanently maintained, inasmuch as by its constituents, the parts of the body removed in the metamorphosis of tissue are not fully replaced, and the fluid diffused through the whole body (fluid of meat) is not kept in its normal composition. A change in the nature of the gastric juice, and consequently in that of the products of digestion, must be looked upon as a result of the long-continued use of salt meat; and if, during digestion, the matters which are indispensable to its progress are taken from other parts of the body, the latter must lose their normal condition."—Translated from the *Annalen der Chimie und Pharmacie* for January, 1865, by William Daniel Moore, M.D. Dub., in *Dublin Medical Press.*

Sad Anachronism in Medical Education.—It is often stated that when the notorious surgical teacher, Paracelsus, wished to show his

aversion to any particular author, he immolated the writings he dissented from in the presence of his pupils. We are not aware that this mediæval practice has ever been adopted in any of our Scottish universities till last week, when it was followed out in one of the class-rooms of the University of Edinburgh. It looks like a plunge backward into the dark ages. The occasion was as follows :—Prof. Simpson has discovered a new method of arresting the bleeding in surgical wounds and operations by temporarily compressing together the sides or tubes of the divided vessels by a needle, instead of tying up their open mouths by threads, which remain for days as foreign bodies in the wound, and always kill or mortify the end of the tied artery. Dr. Simpson's new and simple plan of acupressure has been accepted with much more favor by the profession than new practical suggestions usually are. But Mr. Syme, Professor of Clinical Surgery, without ever trying the plan, denounced it some time ago in most discourteous terms before the Medico-Chirurgical Society of London. Lately, Dr. Simpson issued a quiet pamphlet styled "Answers to the various Objections against Acupressure, or the temporary Metallic Compression of Arteries, adduced by Professors Miller, Erichsen, Neudöfer, Spence, Fergusson and Syme." Last week Mr. Syme took this pamphlet into his class-room, and, without attempting to answer the rather unanswerable arguments which it contains in favor of acupressure, he scolded at the author, and declared the pamphlet to be a piece of "vulgar insolence." "Then came the denouement" (we quote from the letter of an accurate eye-witness). "With firm hand, teeth compressed, pale lines around his orbits, and altogether a most determined and savage expression, he tore up the pamphlet with his fingers, and gave the fragments to his assistants to be consigned to the sawdust box with other surgical remains." One important addition requires to be made to our notice of this indecent scene. The whole had given to it a kind of official character by Dr. John Brown, the assessor or representative of the Lord Rector in the University Court, accompanying Mr. Syme into his class-room on this special occasion, countenancing by his presence and patronage Mr. Syme's proceedings. We do not stop to discuss the question whether, by aiding in this unseemly exhibition, Dr. Brown did or did not dishonor the important trust confided to him by Mr. Gladstone. The whole transaction is likely, we hear, to come under the supervision of the University Court. As one of the seven members of that Court, Dr. Brown, we are afraid, is not in a fit position to sit in judgment on the matter. We feel assured that the very high-minded and honorable Rector of the University will look upon this strange episode in modern university teaching with characteristic regret and disdain.—*Med. Times and Gazette*, from the *Edinburgh Daily Review*.

The Death of Dr. Coale.—At the meeting of the Medical Improvement Society, on Monday evening, the following resolutions were presented by Dr. Ware, and unanimously adopted :—

Resolved, That in the death of Dr. Wm. Edward Coale the Boston Society for Medical Improvement has lost one of its most valued and respected members.

Resolved, That his social and genial nature endeared him as a com-

panion to every one brought within its influence. That his generous self-forgetfulness and devotion bound him as a friend who could be relied upon under all circumstances. That the same active industry and ambition of self-improvement which made him an accomplished man in his profession, also made him a zealous supporter of everything conducive to its honor and welfare. That we mourn the loss of one who filled well the place in which he had chosen to labor for the benefit of his fellowmen, and who had employed to the best advantage the powers with which Providence had endowed him for his task.

Resolved, That while we offer our heartfelt sympathy to the afflicted family which has thus been deprived of a beloved member, we feel well assured that the memory of a life so faithful to all its duties will soften the pang which such a bereavement must bring.

Quinquecentenary Jubilee of the University of Vienna.—This University was founded on the 12th of March, 1365, and great preparations are now making to celebrate the five hundredth anniversary. Dr. Sigmund, in a letter to the *Imparziale,* states that October will probably be chosen for the festivities, in order to allow medical men from all parts to be present. It is stated in the same letter that the most liberal new regulations have been introduced into the Faculty of Medicine, and that the beds in the different hospitals of Vienna are now no less than 4000.—*London Lancet.*

Charitable Bequest in Warsaw.—Dr. Rouczwicz has just died at Warsaw, leaving a sum of 310,000 Polish florins for philanthropic works, of which 150,000 are to be laid out in the purchase of a plot of ground for the Medical Society. An annual sum has also been set apart for two students.—*Ibid.*

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, May 6th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	36	37	73
Ave. mortality of corresponding weeks for ten years, 1853—1863,	39.3	37.5	76.8
Average corrected to increased population - - - - -	00	00	84.02
Death of persons above 90 - - - - - - - - -	0	0	0

Books and Pamphlets Received.—The Essentials of Materia Medica and Therapeutics. By Alfred Baring Garrod, M.D., F.R.S., &c. New York: Wm. Wood & Co.—Physician's Prescription Book, &c., for the use of Medical and Pharmaceutical Students. By Jonathan Pereira, M.D., F.R.S. Fourteenth Edition. Philadelphia: Lindsay & Blakiston.—Hand-Book of Skin Diseases, for Students and Practitioners. By Thomas Hillier, M.D. Lond., Member of the Royal College of Physicians, &c. Philadelphia: Blanchard & Lea.—Our thanks are due to Dr. G. F. Winslow, Assist. Surg. U.S.N., on board the U. S. Steamer Osceola, for a copy of the "Confederate States Medical and Surgical Journal," Vol. I., No. 3, dated Richmond, March, 1864, found at Fort Fisher after its capture by our forces in January last.

Deaths in Boston for the week ending Saturday noon, May 6th, 73. Males, 36—Females, 37. Accident, 1—aneurism. 1—apoplexy, 1—congestion of the brain, 1—bronchitis, 1—cancer, 1—convulsions, 4—consumption, 20—croup, 3—diarrhœa, 1—diphtheria, 1—dropsy, 2—dropsy of the brain, 2—epilepsy, 1—scarlet fever, 3—typhoid fever, 2—disease of the heart, 4—infantile disease, 2—intemperance, 1—marasmus, 1—neuralgia, 1—peritonitis, 1—pleurisy, 1—puerperal disease, 2—smallpox, 4—tumor, 1—stricture of urethra, 1—unknown, 9.

Under 5 years of age, 23—between 5 and 20 years, 7—between 20 and 40 years, 24—between 40 and 60 years, 9—above 60 years, 10. Born in the United States, 50—Ireland, 15—other places, 8.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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CEREBRO-SPINAL MENINGITIS.

[Read before the Boston Society for Medical Improvement, and communicated for the Boston Medical and Surgical Journal.]

By J. Nelson Borland, M.D.

During the past winter there have been five cases of cerebro-spinal meningitis, or, as it is more popularly termed, "spotted fever," in the City Hospital.

Case I.—The first case was that of a young woman, who entered with an ordinary pneumonia on the 5th day of November last. She died on the 9th, having shown her symptoms of meningitis but a few hours.

Case II.—The second was that of a woman who entered Sept. 20th, with neuralgia. She improved steadily until Nov. 24th, when she had her premonitory symptoms of meningitis, and she died in a few hours, early on the 25th. In this case, a petechial eruption came out on her shoulders and chest after death.

The other three cases came under my charge.

Case III.—My term of service commencing on Dec. 1st, I found one of them in an Irish girl, who had been in medium health, not markedly robust. She entered the hospital in the early part of November for a mild attack of rheumatism, and was convalescent, when, Nov. 30th, she was found, at the morning visit, to be partially comatose, squinting, convulsed, frothing at the mouth, pulse fluctuating from 76 to 96. Her consciousness was restored towards night, under the applications of ice to the head, sinapisms to the feet, and stimulating enemata. Excessive pain became developed in the back of the head, cervical and dorsal vertebræ, and also in the præcordial region. The tenderness of the spine was so great as to prevent anything like voluntary motion of the limbs or body, the slightest touch causing excessive pain and convulsions. She had very constant convulsion of the face, most marked about the mouth. Her

pupils were dilated, with converging strabismus. Her tongue was covered with a white coat, soon becoming brown, dry and typhoidal. Her mind was inclined to wander and to hallucinations, yet when spoken to she would generally give lucid answers. Her bowels were obstinately constipated. Her pulse varied from day to day, ranging from 60 to 90, generally being between 80 and 90. Respirations were about 40.

On the 5th of December I commenced giving her powdered ergot, gr. vi., every six hours, and in less than forty-eight hours the catamenia appeared. There was a general amelioration of the symptoms until on the 19th of December, when her convulsions were more severe and more general, and accompanied by opisthotonos, so that I was enabled to pass my arm beneath her and sweep it from her shoulders to below the hips without touching her as she lay on her back in bed. On the 25th of December, I omitted the ergot; she continued to improve slowly until the 14th of January, when I allowed her to sit up fifteen minutes in bed, and applied over the spine emp. belladonnæ, twelve by four inches.

On the 10th of February she had a relapse, and a return of convulsion, squinting, and dilatation of pupil. The pulse exhibited an increased rapidity, but less force. Cold extremities, with opisthotonos and digging back of head into pillow, also returned. I could only account for this return from her having moved and excited herself too much. There was frequent recurrence of the convulsion and opisthotonos, with panting respiration, sounding like a dog that has been running, in hot weather, and loud enough to be heard through the ward, until the 20th of February, since which time she has improved in all respects, with the exception of slight convulsions on the 24th of February and 5th of March. She is now in her right mind, up and about, but since the middle of April she has been annoyed by her old rheumatic symptoms and pains.

Case IV.—The fourth case was in the person of a young woman of American birth, of somewhat scrofulous habit, a dressmaker by trade. She entered, Nov. 3d, with a mild attack of typhoid fever, was convalescent, but on Dec. 2d she complained of headache in the evening, was flushed, had dilated pupils, convulsed face, head rolling from side to side, great pain in back of head and neck, and marked tenderness of cervical vertebræ. Pulse 60, hard, thin.

The next day, the 3d, her pulse was soft, 100. The great tenderness of the cervical had extended to the dorsal vertebræ, with great præcordial pain. She had assumed the fixed position on her back. Her tongue was covered with a white, pasty coat, and was tremulous. Pulv. ergotæ, gr. vi., was ordered every six hours. Then ensued rigidity with occasional tetanic spasms, scanty micturition, most obstinate constipation; her tongue became typhoidal and her face flushed, eyes suffused, pupils widely dilated, convulsions of face and mouth almost constant, most marked on right side. She

answered questions correctly, but failed to notice persons or objects unless spoken to. Pulse 90 to 96; respirations 40. Persistent sleeplessness.

The patient continued in this general condition—excessive pain in back of head and spine, and over heart, sleepless to a great extent, motionless except when convulsed, rigid limbs, pupils widely dilated many days, not answering to stimulus of light, with photophobia, and increased sensitiveness to sounds, some days showing confusion of mind, others apparently clear, with attacks of epistaxis and occasional prolonged convulsions and opisthotonos—throughout all of December. The ergot was omitted Dec. 24th.

On the 29th of December, I gave her extract of belladonna, but a few doses of one sixth of a grain each produced dizziness and dry fauces, but no relief.

By the middle of January she was decidedly better; still there was great sleeplessness, constipation, spinal pain, and very frequent convulsions. Bromide of potassium, in large doses, failed to produce sleep. Ergot was again administered for one week, and on the 17th I applied a belladonna plaster, twelve inches by four, over the spine, with decided relief.

At the end of January she was much distressed by nausea and vomiting, and for about a fortnight she apparently rejected every sort and amount of food—even milk and lime water, in drachm doses, causing emesis; but having a chloroform epithem applied to the epigastrium, the fumes arising quelled the pain and convulsions, and procured some sound sleep. This hint was acted on, and the severer convulsions after this were controlled by the chloroform used in this manner. On the 12th of February, ice cream was received as the first thing she could retain without vomiting.

After this she gradually improved in condition, the constipation being overcome by enemata, though the injection was always the cause of a convulsion.

On March 25th she sat up in bed for a few minutes.

On the 31st, she sat up one hour, and, with the aid of an assistant, walked four steps.

On the 5th of April she had a relapse, increased pain in head and back, convulsion of face and arms; heightened pulse, and respirations 52; coated tongue and unconsciousness. Ergot was resumed for four days. The convulsions, &c., with impaired mind, the memory not extending over the events of an hour, lasted until the 7th; since then she has again improved, and to-day again has her dress on for a while, and she probably will recover.

Case V.—The fifth and last case was that of a very strong, healthy woman, who entered on Nov. 8th, with a mild attack of typhoid. She was nearly well, when, on the 3d of December, she was taken ill with some frontal headache, pain over dorsal vertebræ and severe epigastric pain. Pulse 96; suffused eyes; flushed face; con-

stipation, as in the other cases. ℞. Pulv. ergot., gr. vi., every six hours. This was continued till the 12th. Ice to head. Mustard to feet. She continued to improve gradually till the 18th of December, when she had a very severe general convulsion, lasting ten minutes, with intense pain in head; after this, convalescence progressed steadily until the 27th of January, when she was discharged well.

These cases are interesting from their parallelism, and in the fact that they all were developed without known cause on the same side of the same ward, and at about the same time. Their severity in the three last at any rate were proportionate to the constitutional strength of the patients. They all had intense spinal pain and tenderness, headache, and præcordial pain. Their positions in bed were very similar. There was likewise a similarity in the almost unconquerable constipation during the severity of the sickness; and the marked relapses of each of the three after convalescence was apparently well established. They all had bladders of ice to the head by day and night for weeks, and all were stimulated and nourished as highly as possible. They were seen daily by Dr. Upham, who was in attendance at the same time, and who recognized them as the same disease he had seen so much of in the Stanly Hospital, at Newbern, N. C., and it was at his suggestion that I tried the treatment by ergot in them all, as being the treatment that was most efficacious in the Stanly Hospital cases; it being adopted on the idea advanced by Dr. Brown-Séquard of the property of ergot being to constringe the bloodvessels of the spinal cord, and to divert the blood to other organs—in woman, to the genito-urinary organs.

The patients all acknowledge that the first three weeks of their sickness is an entire blank to them, their first recollections being about Christmas time.

PULMONARY TUBERCULOSIS.—A REVIEW.

[Concluded from page 240.]

Among the facts reported in this part of the volume, are found two cases of peculiar interest, not so much for their happy result as for the length of the uvula described by our author. One person is described as having a uvula two inches (p. 213), and another three inches long (p. 214) and correspondingly enlarged. We have seen a good many uvulas in our day, but have never met with such giants.

Interesting cases of erosion of the epiglottis, and ulcerations about the throat, and of the sudden relief given to cough by topical applications, are given. We have seen similar. But Dr. Green must not ask us to believe that the simple amputation of the uvula, or the touching of ulcers in the throat with nitrate of silver, has prevented phthisis in these cases. We need *proof* of this, while admitting the great value of Dr. G.'s operations in relieving actual bodily

distress and mental anxiety—the latter rather increased, as appears to us, by the strong assertions of Dr. G. that such irritations do, in certain cases, necessarily tend to produce tubercles in the lungs.

We have already extended this notice of Dr. G.'s work far beyond what we intended. We have attempted to deal fairly with it, and to give our candid opinion of it. But the really salient point of it remains to be examined.

In Chapter III. we find Dr. Green's "Treatment of chronic phthisis, following follicular degeneration of the mucous membrane of the air-passages."—(Page 279.)

We might criticize the title as an example of begging the whole question, if Dr. G. means that the phthisis follows the follicular disease as effect follows a cause. He has *not*, as yet, *proved* that point. But we prefer to analyze, and not captiously criticize.

He divides the subject into—1st. The præ-tubercular stage of phthisis. 2d. The bronchitic stage. 3. The tubercular stage. Now we agree, as we have already intimated, with the idea of there being a *præ*-tubercular stage. Yet we think that many of the wisest of our profession do not allow of this. We believe that very frequently, in certain cases and in certain families, we may strongly anticipate the future development of tubercular disease of the lung, even before any marked physical signs about the lungs can be observed. We cannot be sure, but we think that most physicians in actual practice will agree with us that, in such cases, they carry out a plan of treatment entirely analogous to what they would if they really knew that tubercles were actually existing. But in this stage, as we understand it, the throat affection, on which Dr. Green lays so much stress, and the cure of which he claims will prevent phthisis, often bears a very small part. It is the *general undermining* of all the functions of the body, and sometimes, we think, without a trace of throat irritation. Of course, none of the cases brought forward by Dr. Green had physical signs in the lungs, but the five presented by him had some local throat trouble. All were treated by topical applications to the nasal passages, uvula, single follicles on the pharynx or tonsils, &c. Dr. Green says:—"Every year during the last twelve or fifteen years I have saved many valuable lives, I believe, by the employment of prompt and radical measures in the treatment of these well-marked cases of follicular degeneration."—(Page 285.)

Again, on page 289, he repeats the same assertion in still stronger language. "I desire, sincerely desire to impress upon the profession the great importance of *excision* of the heterologous or pathological formations which are so frequently found in degenerated tonsils. Every day of my life I have persons presenting themselves at my office, whose lives are saved only by this operation, followed by appropriate remedies." Dr. Green will pardon us if we say he

is more sanguine of his ability to cure phthisis than we can be; more sanguine than most of the profession is at present, more, we fear, than it will be, even if it adopts all Dr. Green's methods. We doubt not Dr. Green's perfect sincerity, but only demand more proof of the truth of his assertions.

Section II.—The bronchitic stage. Upon this subject we are wholly at variance with Dr. Green. For during a practice of some years, and during which time we have seen a fair share of pulmonary disease, we do not *remember but one single case in which phthisis followed a perfectly distinct and unequivocal attack of bronchitis,* as proved by all the rational and physical signs of that disease.

The cases named by Dr. Green do not, as we believe, sustain his view. That of the gallant General (page 291) proves nothing more than what we most cheerfully admit, because we have had like cases, viz., that under the treatment, internal and topical, pursued by Dr. Green, combined with change of air and relaxation from official duties, the General was, at first, partially relieved, and that subsequently, after fuller treatment (injection into the tubes, &c.) a troublesome cough was so much benefited (we are not sure of entire cure) that he returned to duty. We may congratulate the patient, the Doctor, and the country likewise, that a loyal and valuable officer was by the means used restored to active service in putting down this vile rebellion, but the case proves absolutely nothing about the treatment of consumption or the prevention of it.

Another case is given, in which evident disease of both lungs was noticed: and Dr. Green says, page 294—

"It is unnecessary to detail at length the treatment adopted. Both topical and general remedies were employed. Applications of a strong solution of nitrate of silver were made successively to the fauces, the epiglottis—its border and laryngeal surface—to the glottis, and subsequently into the larynx, and thoroughly down into the trachea and bronchi; the patient was invigorated by tonics and good living. Under this treatment the patient gradually and constantly improved. He regained his voice, his cough diminished, and his strength and flesh were considerably increased."

The patient, however, never really recovered, and died four years afterwards of hæmoptysis. Former tubercles; no recent ones were found, and cicatrices in the trachea were found. Dr. Green thinks they were, and probably they were, cured by his local applications. And as far as one fact goes, it proves that, possibly, the local application of the nitrate may cure some ulcerations of the trachea and larynx, which would have been considered by Louis as the result of the passage of purulent matter from the lungs, and therefore as probably not so amenable to treatment as Dr. G. claims they are. But when Dr. Green attempts to prove that this local treatment was the chief cause of cure of the tubercles of the lungs, it seems to us that he attempts to prove too much, and that he forgets tonics and good

living were also used. We have all seen cases of tubercular disease, even in the advanced stage of cavities, cured *without local treatment.* We must, however, confess that this case has given us some courage to carry persistently onward the local together with the general treatment of these unfortunate cases of laryngeal phthisis. We hope we shall be as successful in all our cases, even as Dr. G. was in this, but we anticipate disappointment; for hitherto in our hands such local treatment has been of little avail, save to relieve, in some few cases and in some slight degree, the local suffering of the patient. We have never seen an undoubted case of laryngeal phthisis cured by it, and we have seen some injured. Possibly the fault may have been with us, and this is one reason why we wish Dr. Green had written less of theory and had given us more of facts, so by the interpretation of them we might have more courage in undertaking his last and still more heroic methods.

These are brought forward in Section III. of this Chapter, page 297, "Tubercular stage of phthisis." It is all important to anticipate this stage by treatment of the throat ailments which precede. Dr. Green says:—

"The attempt has not been made in this work to trace distinctly and positively the line of demarcation between the non-tubercular and the bronchitic stage of phthisis on the one hand, and the tubercular stage of the disease on the other. In the first chapter of the work we alluded to the unfortunate fact, that it is not until the antecedents have given place to the consequent—not until the morbid product has to some extent blocked up the air-cells, that the physical signs, which constitute the only positive evidence of the actual presence of tubercular disease, disclose to us the true nature of the malady. It has been constantly insisted upon that deterioration in the cellular elements of the aerial membrane may commence, and often continue through an indefinite period, before proliferation shall take place in the air-cells of the lungs."

But he likewise adds, that "alterative medicines and tonics," together "with topical treatment," should be "persistently employed." "Iodide of potassium in drachm doses, with topical applications, for months."

But owing to the difficulty of introducing the sponge into the trachea and air-tubes, or, in other words, to use the same local treatment for the lungs as that used for the throat, he proposes "catheterism of the bronchial tubes."

This operation, although the description of it occupies only twenty-five of the 350 pages of the volume, is the most important suggestion, and by its adoption or rejection by the profession will Dr. Green's book eventually be judged. Here is a bold proposition, viz., to inject, by means of a gum-elastic catheter, into the bronchial tubes a solution of nitrate of silver.

We all remember the violent discussions that arose in New York in regard to Dr. Green's original suggestion of passing a catheter

into the trachea. Some able men in the profession even now deny the possibility of so doing. In our opinion, Dr. Green is correct. We believe it can be done. We can use the probang thus, and also the catheter, at times, easily. But the proper period of the respiratory act, viz., the moment when the patient has fully inspired and is just on the point of expiring, must be the chosen time. In very many cases the local application simply *to* the vocal cords has answered all the purposes of relief without any passage through. We know many patients subject to asthma who have obtained vast relief in this way. We have never cured a case of phthisis, or any case in which we strongly suspected the disease, by simply using the probang. Dr. Green would say, perhaps, that by thoroughly cauterizing the tubes we might have done so.

Years since, we tried catheterism, only a few times, it is true. These experiments did not induce us to carry out the system, more especially as we heard rumors of unfortunate results in one of the first of Dr. Green's cases. We regret that Dr. Green has not even alluded to the well-known report of the case of a gentleman who was said never to have recovered from the effects of an injection made by Dr. Green himself. It would have been better to let us know the worst about any such matter. Now, a doubt remains. But Dr. Green quotes Dr. Bennett, of Edinburgh, as saying that this method may form a new era in the treatment of pulmonary disease.* This was in 1858. But one year afterwards Dr. B. informed us that he was really afraid to use it, because he thought one of his patients would have died after its use. Dr. Green and Dr. Richards both had cases of violent spasm and great distress. Trousseau *thinks* injection of nitrate of silver into the bronchi killed one of his patients. It is by no means certain that it did so; but the report of the case shows the fears of the eminent Professor of Therapeutics at the Ecole de Médicine.

Dr. Green says, however, as the result of his experiments on animals, and the use of this method on his patients, that these difficulties may be avoided if the following rules be observed:—1st. Use a very mild solution—viz., gr. v. or x. argent. nitrat. to ʒ i. of water. 2d. If there be any spasmodic action of the larynx, the tube should be immediately withdrawn and no injection made. 3d. Patients should be gradually accustomed to manipulations about the throat by previously, for days, using the probang.

On page 316 is a long statement about 106 cases, which, we regret to say, neither we nor two assistants can possibly reduce to any tabular analysis, so that the facts will agree with Dr. G.'s general remarks. This is the more extraordinary, because almost identically the same words were used several years ago (*New York Medical Journal*), and it is strange that Dr. G. repeats the same rather inco-

* Clinical Lectures on Medicine, p. 609.

herent paragraphs. But although we cannot make this tabular statement agree with the preceding remarks by Dr. Green, one thing is plain, that out of 114 cases only 10, or at the utmost 24, received no benefit. But let us examine more closely. Of the phthisical cases, none of the *severer* forms were cured; 25, or about one third, were relieved, and "lives were probably prolonged"; and 7 received no benefit. Of the milder forms, 12, or about one third, were cured "*apparently.*" We quote and italicize, and the thought that we have while reading it is, that Dr. Green himself has some doubt about the results. Five are, or were, in good health when heard from; 17 were much, 3 a little, and 3 not at all relieved. Speaking generally, we may say that of the cases of early phthisis, 17, or a little more than two fifths, were apparently cured; 20, or one half, were relieved; and only about one sixteenth failed of relief. Of the cases of *bronchitis*, more than one half were *cured*, and the remainder were much improved. If the above results are correct, and we can have perfect confidence in the powers of diagnosis of Dr. Green, we must deem them as of the highest importance. In suggesting the doubt we do not mean to intimate any disrespect to Dr. Green's diagnosis in the cases referred to. But the results are so remarkable, that upon this ground alone, we claim that Dr. Green should have published an exact record of his cases, with a clear account of the progress of the physical and rational signs towards a cure. Unless that is done, there will be a doubt until others have tested for themselves the value of catheterism.

Meanwhile, we will terminate this part of our subject with the following quotation (page 317):—

"This method of treatment, in this class of diseases, has been continued, more or less, since the report to which I have referred was made; and such has been the amount of success which has continued to attend this plan of treatment up to the present time, I am now ready to affirm, after an experience of many years, in a field of observation unusually large, that *if I was required to relinquish all other known therapeutic measures or topical medication in the treatment of diseases of the chest, I should choose the latter, with hygienic means alone, in preference to the entire class of remedies ordinarily employed in the treatment of these diseases.*"

In Chapter VI. are given Dr. Green's views of "General Remedies." From it we infer that Dr. G. is not one of the modern sceptics in regard to medicines. In his hands arsenic is a "highly efficacious" remedy "in all stages of chronic phthisis." *Manganese* has given "signal benefit." Hydrocyanic acid will exert in some cases "a powerful and decidedly happy influence" on follicular bronchitis. The remarks are brief, and merely express the general views of the author upon the subject.

In the above analysis we have endeavored to do entire justice to Dr. Green. We probably shall not satisfy either the friends or the

opponents of that gentleman. Although agreeing with him that local applications to, and operations on, the throat and larynx are of immense benefit to some troublesome coughs, we do not feel that it is yet "*proven*" that such local applications prevent phthisis, or that catheterism of the bronchial tubes cures it. *A priori*, from our own experience, not only of the innocuousness of nitrate of silver when applied to the larynx, but of its great benefit in cases of asthma and some coughs, we should not be inclined to fear its application lower down, or into the bronchial tubes. The only objection would be the difficult and troublesome nature of the operation. A skilful manipulator might overcome all objections. The proof of the truth or falsity of Dr. Green's views is yet to be given. Meanwhile we must admit that our author has thoroughly opened the subject, and if eventually the profession should decide his views to be correct, Dr. G. will have, and ought to have, greater fame for his suggestions in regard to the etiology and treatment of phthisis than any other writer, either of the present or of past times.

ON A NEW MODE OF TREATING DISEASES OF THE CAVITY OF THE NOSE.

By J. L. W. Thudichum, M.D., M.R.C.P., Lettsomian Professor of Medicine of the Medical Society of London.

The treatment of diseases of the cavity of the nose has hitherto been attended with very great difficulties, owing to the circumstance that the cavity is large, complicated by many sinuosities, interrupted by many thin bony and membranous projections, and therefore little accessible, and for the most part not accessible at all, to instruments by which growths might be removed, or topical remedies applied. The removal of excrescences from the lower and median nasal canal was yet the most successful of surgical operations, although it was frequently left incomplete, or remained unavailing, owing to the speedy return of the polypi. But the topical application of remedies for the treatment of acute and chronic affections of the nasal cavity, which is certainly the principal therapeutic requirement, and in many cases prevents the formation of polypi, could only be attempted by mechanical contrivances which were so objectionable to the patients that after longer or shorter trials they had to be abandoned. I have had under my own care several important cases of affection of the nasal cavity, in which the mere possibility of cleansing the cavity of the nose would have been a great boon to the patients; others, in which I have no doubt the application of remedies, such as we are in the habit of using in conjunctivitis, would have effected a speedy recovery from painful and troublesome conditions. The only mode of cleansing the cavity of the nose which was then known in medical science was by injections with a syringe; but, ow-

ing to the velocity with which the injected fluid touched the walls of the nose, this process always created much irritation, pain, sternutation and lachrymation, and the patients mostly opposed the entrance of the fluid by expiratory efforts, which, indeed, were the only means they had of preventing the fluids from running down the choanæ and reaching the larynx. The mere effect of pure water upon the Schneiderian membrane being highly irritating, two causes combined to defeat the object of injections of water; and when medicines which might be supposed to have a beneficial effect upon the diseased Schneiderian were dissolved in the water, they, although perhaps better tolerated than pure water, could not be kept sufficiently long in contact with the affected parts to exercise upon them even such slight medicinal action as their necessarily diluted state permitted. There was a third application that could be made—namely, the introduction of medicines in the form of fatty or mucilaginous ointments. In one case in which I endeavored to benefit a chronic ozæna—a residue of scarlet fever—by topical applications, a solution of sulphate of zinc in intimate mixture with lard had a most decided effect, the patient being much improved, though not cured. But this application of ointment to the surface of the lower canal of the nose, and to a part of the median canal—which are the only portions that, as a rule, can be reached, even by clever manipulation—is the most objectionable of any, so far as its accompaniments of irritation and pain are concerned, sternutation and lachrymation being not rarely long continued after it, and the peculiar pain producing a reluctance on the part of the patient, which it is difficult to overcome in young and old people. All these applications, then, were partial, imperfect, irritating, and consequently unavailing to effect the desired end. Many cases of superficial ulceration ended in caries, embittering the life of the patients, and through the odor making intercourse impossible and family relations troublesome; other cases of chronic inflammation ended in deformity of the external nose and the formation of polypi in its cavity, and produced a constant false resonance of the voice; a number lasted throughout a lifetime, the nose being a constantly weak part, and capable of prostrating the patient at any opportunity which dust and wind might afford; others had consequences even more severe, and the specific ulcerations of the cavity of the nose only too frequently terminated in that sinking of its bridge which is the most painful proclamation of disease with which a patient can become afflicted. Then there were the convulsive affections produced by local irritation in the nose—those cases of fabulous sneezing in which hardly any remedy availed, even in diminishing the number of spasms in time, because the centre and seat of the irritation could not be reached by medical agencies. Truly dangerous were some cases of bleeding from the nose, in which the broken bloodvessel could not be reached by either styptics or mechanical compression,

and could not be made to contract by contact with that most powerful of hæmostatic agents, ice or ice-cold water. Not a few cases of this kind terminated fatally, or required the most desperate measures to prevent the fatal end, such as plugging of the nose and choanæ with sponges or tinder; and these not rarely left a condition of anæmia in which other accidental diseases could put a stop to life with comparative ease, or which continued without the supervention of other diseases, enfeebling and considerably shortening the rest of the life of such patients.

All these difficulties, and many more which might be mentioned, are removed at one stroke by the discovery of Professor Weber, of Halle: that when one side of the nasal cavity is entirely filled through one nostril with fluid by hydrostatic pressure, while the patient is breathing through the mouth, the soft palate completely closes the choanæ, and does not permit any fluid to pass into the pharynx (a physiological fact thus far already discovered by E. H. Weber, of Leipzig, before 1847, and published in Muller's Archiv, 1847, pp. 351–354): while the fluid easily passes into the other cavity, mostly round and over the posterior edge of the septum narium, in some persons also through the frontal sinuses, and escapes from the other open nostril, after having touched every part of the first half of the cavity of the nose, and a great part, certainly the lower and median canal, of the second half. By means of the application of this principle to the treatment of diseases of the nose, it is possible easily and frequently to wash the nasal cavity, to disinfect and deodorize it, to remove the sordes which accumulate so easily in it, and to apply to its surface a great number of beneficial medicinal substances, so as to prevent acute affections from extending, and to incline them towards a speedy recovery: to stop hæmorrhages, allay irritations, and subdue in a remarkable manner chronic affections of the Schneiderian membrane, so as to re-establish a perfectly healthy surface and normal condition of the organ of smell.

Of the medicinal solutions which may be applied to the cavity of the nose.—Although the solutions before enumerated act in a measure as alteratives, resolvents, and escharotics, and, therefore, rarely constitute a sufficient medical application by themselves, yet they are more frequently used for preparing the nose for the application of more energetic and specifically acting solutions. To this latter class belong the solutions of alum, sulphate of zinc, and sulphate of copper —the best astringents; the solutions of nitrate of silver, and bichloride of mercury—the most suitable alteratives; and the solutions of chloride of calcium, in which suboxide or oxide of mercury is suspended in a finely subdivided state, together with the bichloride solutions—the best specifics. Of stimulating solutions, a mixture of eau de Cologne with water or salt-water is sometimes useful.

The probable concentration of these solutions can be surmised from the circumstance that the sensibility of the healthy nasal cavity

stands about midway between that of the eye and the mouth. When the nasal cavity is completely filled with fluid, the specific sense of smell cannot any longer be exercised; even the solution of eau de Cologne is not perceived to be such when it once fills the nose. The sense of smell being thus entirely obliterated by the fluid contained in the nose, the reflex effects which substances may exercise by means of this sense are entirely absent; and the only impingement which the fluids can produce is upon the filaments of sensitive nerves coming from the fifth pair. It is owing partly to this circumstance that comparatively strong medicinal solutions are borne by the nasal cavity without great secretion. Another circumstance favoring the application of stronger solutions is the ready manner in which the healthy surface of the nose defends itself against irritating, chemically-impinging substances by means of a copious flow of mucus. Excoriated or ulcerated parts lack this power of rapid secretion; and hence they are affected by medicinal solutions much more than the healthy parts of the surface of the nasal cavity. What is here stated is the general result of experience and experiment; but, at the same time, I must insist that the application of medicinal solutions in each case should be begun with the greatest caution, as individuals differ greatly in point of irritability of the nasal cavity. In the beginning, therefore, very dilute solutions of medicinal substances should be used, and their strength be increased gradually, after their effect has been well exhausted, by the use of greater quantities applied by a quick flow, or the use of smaller quantities in a slow current distributed over a longer time of contact.

Solution of alum.—Half an ounce of roughly-powdered crystallized alum is dissolved in a small quantity of hot water, and the solution made up to one quart by means of cold and tepid water in such a manner as to ensure that the temperature of the solution should be below, but near to, blood-heat. In superficial ulceration or blenorrhagic conditions this solution is well borne. Ulcerated parts, which before its application were red, mostly appear as white patches after its application, thus showing that the effect of the alum on the ulcerated surface has been considerable. When I was desirous to manage with smaller quantities of solutions, I have sometimes mixed a little permanganate solution with that of alum.

Solution of sulphate of zinc.—From a scruple to a drachm of the sulphate of zinc, dissolved in a quart of warm water, together with half an ounce or an ounce of sulphate of soda or sulphate of magnesia, gives a suitable fluid.

Solution of sulphate of copper.—Of this sulphate also from a scruple to a drachm, mixed with half an ounce or an ounce of soda sulphate or magnesia sulphate, can be dissolved in a quart of warm water.

Solution of acetate of lead.—Of this crystallized acetate from a drachm to two drachms, together with half an ounce or an ounce of

crystallized acetate of soda, may be dissolved in the quart of warm water.

Solution of nitrate of silver.—Of this salt not more than from half a grain to a grain should be dissolved in each ounce of water. A quart of water, therefore, in which previously from half an ounce to an ounce of nitrate of soda has been dissolved, may receive from sixteen to thirty-two grains of the nitrate. In particular cases the solution may be made stronger. The nitrate of potash is not so good as the nitrate of soda, because it has slightly irritating qualities. When it is necessary to use it in an emergency, when soda nitrate cannot be had, the solution should be more diluted.

Solution of bichloride of mercury.—The greatest caution is necessary in the use of this agent, as it has a tendency to produce excoriations on healthy surfaces. The first solution to be employed should be one containing five grains of corrosive sublimate in a quart of water, in which an ounce of common salt is also dissolved.

Solution of chloride of calcium with suspended oxide or suboxide of mercury.—These fluids are the common phagedænic waters, or black and yellow wash, to which common salt has been added. Two drachms of calomel, twelve fluid ounces of lime-water, one ounce of common salt, and twenty ounces of warm water, yield the black solution. One scruple of corrosive sublimate, one ounce of common salt, twelve fluid ounces of lime-water, and twenty fluid ounces of common warm water, yield the yellow wash. These mixtures must be well agitated in the glass vessel while being allowed to run through the nasal cavity.

Sedative solutions.—Of prussic acid forty minims to the quart of warm salt-water, of tincture of opium two drachms, may be taken. These drugs may be added to some of the above solutions of metallic salts. But if this is desired, it is better to substitute a solution of morphia for tincture of opium. The prussic acid is incompatible with the copper, silver, and precipitated mercury solutions; it goes conveniently with the alum and common salt solutions.

Styptic or hæmostatic solutions.—Amongst these, ice-cold salt water, containing an ounce of salt to a pint of ice-water, takes the first place. When this, after having been continued for a considerable time, is insufficient to stop the hæmorrhage, a fluid ounce of the tincture of the sesquichloride of iron may be added to each pint of ice-cold salt-water.

Stimulating solution.—One ounce of eau de Cologne upon ten ounces of salt-water, is a useful stimulant. Strong spirit of wine may be taken in place of the eau de Cologne.

I have now fully, and for some readers perhaps somewhat too explicitly, described a number of medicinal solutions which may with advantage be applied to the treatment of nasal diseases by the method in question. I was desirous to impress upon the memory of the reader the fact that I recommend only such solutions as are

brought up to a certain specific gravity by salts which do not decompose the medicinal agents. There may be cases in which it is desirable to swell the Schneiderian membrane by watery fluid and produce endosmosis, and others in which highly concentrated solutions may beneficially be used to effect exosmosis and shrivel Schneider's membrane. These adaptations, and the various accommodations of the fluids and their degrees of concentration, I must leave to the skill and ingenuity of those who make use of this method. They will also probably multiply the resources of the rhinotherapeutic pharmacy, and thereby add to the success and certainty of this interesting method of treatment.—*London Lancet.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, MAY 11, 1865.

THE ARMY MEDICAL STAFF.*—Honored and respected as we are happy to believe the surgeons of our armies have generally been through the four years' war which has now come to a close, it cannot escape the recollection of our readers that at times there has been more or less complaint that it was wanting in efficiency and fidelity; and exaggerated accounts of mortality from disease and wounds have sometimes been published in a way to give the impression that many lives have been sacrificed from neglect or want of skill. We have occasionally seen, in the correspondence of foreign journals, highly-colored pictures of the unavoidable ravages of war, so presented as to reflect upon the officers whose special duty it was to attend to the health and physical well-being of the troops. Such reflections as implying a general condition of inefficiency and neglect, no properly informed person can for a moment regard as other than libellous or highly colored pictures of the imagination. Whatever of inability there was, early in the war, on the part of the small body of surgeons of the regular army, and the large number of totally inexperienced surgeons of volunteers, to cope with the formidable difficulties of new responsibilities and labors, under a system unavoidably insufficient for the occasion—was, as all men know, most triumphantly overcome by the diligent efforts of the surgeons themselves, seconded by the unstinted aid of the whole people. All honor to the men who labored without rest until our present excellent system was perfected, and all honor to the government which has so liberally seconded the efforts of the medical staff, until at the present time the system may be favorably compared with that of any other nation.

These reflections have been prompted by reading the very interesting and instructive address of Assistant Surgeon Warren Webster, of

* The Army Medical Staff. An Address delivered at the Inauguration of the Dale General Hospital, U.S.A., Worcester, Mass., February 22, 1865. By WARREN WEBSTER, M.D., Assistant Surgeon U. S. Army, in charge of De Camp General Hospital, Davids' Island, New York Harbor. Boston: Wright & Potter. 1865. Published by the Medical Commission of the State of Massachusetts.

the Regular Army, delivered at the inauguration of Dale General Hospital in February last. It was listened to at the time by a large audience with marked attention and delight, and the Medical Commission of the State, who were among the guests on that occasion, have done well in publishing it for the benefit of the profession at large.

Dr. Webster has brought together in the pamphlet before us a vast amount of information, gathered from a variety of sources, which it would be difficult for the general reader to get access to in any other form. The main argument of it is to show, by contrast of the medical department of the United States Army with those of England and France in time of war, to what a degree of perfection our own has attained. The vast amount of work done appears by some of the statistical statements. Thus, we find that—

"In March, 1861, there were no military general hospitals in the United States. To-day there are under the orders of the Surgeon-General, one hundred and ninety-five, with a capacity of one hundred and twenty-nine thousand nine hundred and fifty beds, bounteously provided with everything which the wisdom of Congress, and a soundly educated public opinion on such matters, deem necessary."

And again:—

"At the beginning of the present strife, there were but one hundred and seven commissioned medical officers in the army of the United States. Now there are five hundred commissioned officers of the medical staff, two thousand physicians serving under contract, and a vast force of regimental surgeons and assistant surgeons. The estimate submitted to Congress of the expenses of the medical and hospital service of the army for the year commencing June 30, 1861, and ending June 30, 1862, was one hundred and fifteen thousand dollars. For the year ending June 30, 1863, the expenditure for the same class of items was eleven million five hundred and ninety-four thousand six hundred and fifty dollars; and this amount, it will be remembered, does not embrace soldiers' pay, rations and clothing, or the construction of hospitals. How was it proper or possible, under all the circumstances of our national life, for the government to be, in every sanitary relation, perfectly prepared for events which demanded such instant enlargement of the medical staff, and such enormous increase of expenditure? And yet how quickly were these deficiencies remedied, and from that early hour how constant has been improvement!"

Comparing the working of our army medical system with those of other nations, Dr. Webster shows that even before the present war our own showed manifest superiority over others in its practical working. The circumstances under which the British Army entered upon the Crimean war he considers as fairly comparable with those under which the United States Army entered on the campaign from Vera Cruz to Mexico; but how far different was the result! In regard to the former he says that the imputed deficiencies of the British War Office made the beautiful valley of Devna a literal Valley of Death to the stalwart Anakims of the household troops, whereas—

"The American army, on the other hand, landed from the open sea upon the beach of Vera Cruz, encamped upon localities infected by the vomito, invested the Castle of San Juan de Ulloa, accomplished the reduction of the castle and surrender of the city, with such admirable hygienic precautions that there was no unusual suffering from disease. Throughout that brilliant campaign, from Vera Cruz to the city of Mexico, beginning in March and ending in September, of the same year, there was, with all the keen-eyed watchfulness of correspondents of the newspaper press at home, no official or popular complaint of medical mismanagement. There were no notes of woe, such as went up in dismal chorus from the whole English

press during the latter part of the year 1854, and which inspired the '*Times* Fund of Relief.'"

And so in the terrible suffering and death from disease in the French army towards the close of the Crimean war, presenting such a strange contrast to its comparative immunity at the outset, Dr. Webster finds reason for a contrast most favorable to the workings of our own system. We cannot follow him, as we should like, in his discussion of the defects in the systems of both European armies, but we are particularly struck with the great incongruities and errors of organization in that of the French Army, to which we think he justly attributes in a very great degree the terrible mortality which has been thought by one writer at least to have compelled a hasty peace. He shows that there was the most lamentable want of authority here for the medical officers. These officers, in the general administration of the army hospital service, were under the control of a set of non-medical men, of no higher rank or fitness for the duty than the quartermasters of our service, and were known by the title of *Intendant.* This officer was the only lawful authority in the hospital, and could censure any medical officer or place him under arrest. All of the important matters of hospital construction, air-space, ventilation, &c., were left to him. "He mulcts the surgeon in a sum equal to the cost of any deviation from the established diet tables, and, strangely enough, can direct the apothecary to cast aside any prescription not strictly conformable, in name or contents, to the official formulary. The surgeon may represent the desirableness of suppressing noise or disturbances in or about his wards, separating one class of diseases from anothor, renewing bedding, purifying a ward or removing and punishing an inattentive or disobedient nurse, but can do neither of these things of his own motion." And in the field the case was the same; the surgeons being regarded as merely auxiliaries of the medical department "only when a prescription of medicine or diet is needed, or the performance of some surgical operation required. They cannot give a military command to the lowest inferior, except by the direct and immediate authority of a military officer." Our own system, which allows a certain military rank to all our army surgeons, incomplete as it is in this respect, is far above this. Who can wonder that under such a system, before the end of the Crimean war, the number of the French medical staff became so small as to be entirely inadequate to the needs of the army? In the British army the case was far better, the regimental surgeon having charge of the sick and wounded, and keeping it, being directly responsible to his own department. The result of this better system was seen in the superior condition of the British over the French army in the latter part of the Eastern campaign. The terrible lessons of the Crimean war, together with the earnest appeals of high medical and military officers, opened the eyes of the Emperor to the great defects in the medical department of his army, and in the Italian campaign he was accordingly induced to bestow on the Surgeon-in-Chief of the French forces, Baron Larrey, almost unlimited power in his department. This fortunate confidence led to the happiest results, so that the army entirely escaped the terrible epidemics which led to such mortality in the Crimea, and the large number of wounded were fully provided for. Still it does not appear that any

fixed system of reform has as yet been permanently adopted in this department of the French army.

Dr. Webster next turns to the hospital system of the English army, and shows that it is still wanting in many of the features which have been adopted in our own, which has reached a point very near perfection at the present time. The most important points in our hospital organization are summed up in the following order of the War Department, of December 27th, 1864:—

REGULATIONS CONCERNING HOSPITALS.

I.—U. S. General Hospitals are under the exclusive control of the Surgeon-General, and will be governed by such regulations as the Secretary of War shall approve, upon his recommendation.

II.—Medical officers, commissioned in the regular army or volunteer service, assigned to duty in charge of U. S. General Hospitals, acting under the instructions of the Surgeon-General, and not subject to the orders of local commanders, other than those of geographical military departments, or divisions, are charged with all the duties of commanding officers, and will be obeyed and respected as such. By order of the Secretary of War:

(Signed,) E. D. TOWNSEND,
Assistant Adjutant General.

Dr. Webster's admirable address concludes with a well-deserved tribute to the heroism of army medical officers, showing that in the Mexican war the only losses among General Scott's staff were from the medical portion of it, and that a larger number of surgeons perished in the Crimean war than of any other officers in the allied army. He also refers in terms of just compliment to some of the medical staff of the United States Army, who have recently received brevet promotions, and to the favorable condition of the hospital department of the East in proof of their well-deserving.

We would recommend Dr. Webster's pamphlet to the notice of all who take a just pride in the working of the medical department of our army at the present time; it does its author great credit. We observe that one of our cotemporaries copies the pamphlet in full, in recognition of its value.

THE CONNECTICUT RIVER VALLEY MEDICAL ASSOCIATION held its annual meeting at Bellows Falls, May 3d, Dr. Webber, of Charleston, N. H., President, in the chair. After the report of the Secretary, the Association proceeded to ballot for officers for the ensuing year, with the following result:—*President*, John Crowley, M.D., of Mount Holly, Vt. *Vice President*, James A. Gregg, M.D., of Newport, N. H. *Recording Secretary*, H. D. Holton, M.D., of Putney, Vt. *Corresponding Secretary*, A. B. Crosby, M.D., of Hanover, N. H. *Treasurer*, Samuel Nichols, M.D., of Bellows Falls, Vt. *Auditors*, Drs. D. Campbell and H. D. Holton. *Committee on Credentials*, Drs. Nichols and Sawyer. *Committee on Publication*, Drs. Simons, Holton and Webber. *Delegates to the American Medical Association*, to be held at Boston in June, Drs. John Crowley, Mt. Holly, Vt., L. Sawyer, Springfield, Vt., S. G. Jarvis, Claremont, N. H., Geo. B. Twitchell, Keene, N. H., Samuel Nichols, Bellows Falls, Vt., L. E. Simons, Saxton's River, Vt., H. B. Porter, Paper Mill, N. H., D. R. Story, Proctorsville, Vt., Z. G. Harrington, Chester, Vt., G. W. Hunt, Cornish Flat, N. H. *Dele-*

gates to the New Hampshire State Medical Society, Drs. J. N. Styles, of Windsor, Vt., and L. Graves, of Langdon, N.H. *To the New York State Medical Society*, Drs. B. F. Ketchum, of Brattleboro', Vt., and M. C. Edmonds, of Weston, Vt. *To Vermont State Society*, Drs. French, of Paper Mill, N. H., and Chapin, of Ludlow, Vt. *To the Massachusetts State Medical Society*, Drs. D. W. Hazelton, of Cavendish, Vt., and C. E. Baker, of Claremont, N. H. *To Maine State Medical Society*, Drs. Higginson, of Brattleboro', Vt., and Cummings, of Claremont, N. H. *To Connecticut State Medical Society*, Drs. D. Campbell, of Saxton's River, Vt., and G. F. Gale, of Brattleboro', Vt. *To Rhode Island State Medical Society*, Dr. Volk, of Claremont, N. H.

The retiring President, Dr. Webber, delivered an address upon the Theories of Medicine, which was listened to with marked attention. The thanks of the Association were voted to Dr. Webber, on motion of Dr. Simons.

Dr. Volk exhibited nearly four feet of the small intestine of a young woman, which had passed per anum after a severe attack of colic. It would seem, from the history of the case, that she suffered from occasional attacks of colic. In one of these, three months previous to the one in which the specimen was voided, she suffered from hæmorrhage, but subsequently appeared well. After passing the portion of intestine she became very much emaciated, and died at the end of four months. A *post-mortem* examination revealed a stricture of the small intestine, which measured only sixteen feet in length. This case presents several interesting points :—first, the length of the intestine which sloughed away ; second, the great length of time (three months) that elapsed between the hæmorrhage, when it most probably became detached, and the time when it was passed per anum.

Dr. Holton read a paper upon Puerperal Convulsions, which was discussed by Drs. Hunt, Harrington, Cooper, Frost, Porter and Simons, after which it was referred to the Committee on Publication.

Dr. A. B. Crosby read a paper upon Ovariotomy, which was listened to with great interest, and, on motion of Dr. Campbell, was referred to the Committee on Publication.

The President then called upon the members to state what epidemics, if any, were, or had been prevailing in their several localities, after which the Association adjourned to meet on the first Wednesday of July, at Keene, N. H.

Venereal Diseases in Vienna.—Dr. Sigmund states that, in spite of the regulations respecting prostitution, he had in his venereal wards, in the course of 1864, four thousand patients. The two hundred and seventy-five beds given up to the treatment of sexual diseases are always full. From this number, Dr. Sigmund picks out fifty-two of the most instructive cases, who are placed in the clinical wards, where the Professor makes remarks, and directs the attention of the pupils to the principal phenomena of the disease.—*Lond. Lan.*

Action of Kreosote in the Treatment of Sycosis.—Dr. Masse called the attention of the Paris Academy of Sciences to the use of kreo-

sote to destroy the growth of spores in parasitic affections of the skin. The idea was a deduction of Bèchamp's experiments, proving that this essential substance stops the development of spores of mucedines, and of ova of infusoria in fermentable solutions. Cryptogamous parasites resembling in their organization those growing during fermentation, Dr. M. thought that kreosote ought to act on them in the same way. The experiment was successfully tried with a young soldier having sycosis. Spores and tubes of the *mycrosporon mentagrophyte* were discovered with the microscope in the tubercles of the affected bearded portion of the face. The patient was cured after eight days of treatment, consisting in lotions, made twice daily, with fifty gram. of water, fifty of alcohol, and fifty centigram. of kreosote. —*New York Med. Journal,* from *France Médicale.*

Dr. Richardson, an English chemist, says that iodine, placed in a small box, with a perforated lid, destroys organic poison in rooms. During the continuance of an epidemic smallpox in London he saw the method used with benefit.—*Am. Druggists' Circular.*

The Pennsylvania Coal-fields yielded about 230,000 tons of coal per week for August, September and October, making last year's production 1,700,000 tons more than 1863. The supply is now greater than the demand, and lower prices must result.—*Ibid.*

The number of graduates recently at the College of Physicians and Surgeons, New York, was [illegible]; at the Buffalo Medical College, 50; at the Charity Hospital Medical College, Cleveland, Ohio, 38.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, May 13th, 1865.

DEATHS.

	Males.	*Females.*	*Total*
Deaths during the week - - - - - - -	43	39	82
Ave. mortality of corresponding weeks for ten years, 1853—1863,	35.9	34.9	70.
Average corrected to increased population - - - - -	00	00	77.4
Death of persons above 90 - - - - - - - - -	0	0	0

Pamphlets Received.—Annual Report of the Provost Marshal General, Washington.—Report of the Case of William Gilman, indicted for the murder of Mrs. Harriet B. Swan, before the Supreme Judicial Court of Maine.

Married,—At Newark, N. J., May 2d, Dr. J. T. Calhoun, U.S.A., Surgeon in charge of Ward U. S. General Hospital, to Miss Nora C. Orr.

Deaths in Boston for the week ending Saturday noon, May 13th, 82. Males, 43—Females, 39. Abscess, 1—apoplexy, 2—inflammation of the bowels, 1—congestion of the brain, 1—disease of the brain, 5—inflammation of the brain, 1—bronchitis, 2—burns, 1—cancer, 1—consumption, 19—convulsions, 3—croup, 2—cyanosis, 2—cynanche, 1—diarrhœa, 1—dropsy, 1—erysipelas, 1—scarlet fever, 1—gangrene, 1—disease of the heart, 5—hernia, 1—infantile disease, 1—intemperance, 2—disease of the kidneys, 1—disease of the liver, 1—inflammation of the lungs, 5—marasmus, 1—old age, 1—paralysis, 3—puerperal disease, 1—purpura, 1—rheumatism, 1—smallpox, 5—syphilis, 1—unknown, 4—whooping cough, 1.

Under 5 years of age, 30—between 5 and 20 years, 8—between 20 and 40 years, 21—between 40 and 60 years, 14—above 60 years, 19. Born in the United States, 53—Ireland, 21—other places, 8.

THE

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TUBERCULAR PERITONITIS, OR SCROFULOUS INFLAMMATION OF THE ABDOMINAL VISCERA.

BY W. H. TRIPLETT, M.D., WASHINGTON, D. C.

[Communicated for the Boston Medical and Surgical Journal.]

THIS is a chronic disease in the widest acceptation of the term, and, withal, the most ambiguous. Why medical writers have so generally overlooked it altogether, or made but cursory allusion to it, is a mystery to me, inasmuch as they must have had some of these cases under their charge. Not less than four or five have come under my own observation. They are an eccentric and peculiar class of cases, and, so far as my own experience is concerned, have occasioned me more annoyance and perplexity than would be believed. I shall never forget the trouble my first patient caused me, and though at last I had the satisfaction of knowing that her disease had been incurable from the first, yet had I been fully advised of its nature, I think I might have withheld much useless medicine and been spared many moments of needless anxiety.

When I opened the abdomen of the dead woman, the mystery was at once explained. I was amazed at the organic lesions that were revealed:—bands of solidified lymph, in various stages of organization, fastened and glued the abdominal organs in a confused and matted mass, putrid with fœtid pus; thousands of little elevated bodies, variously discolored by venous congestion, thickly studded every portion of the peritoneum, being more thickly grouped over the liver and stomach, the organs that occasioned the greatest distress. The folds of the omentum and mesentery were loaded with them, and were greatly swelled and altered in texture. These tubercles were of various size—most commonly of the size of small shot or mustard seed, and were deposited in the subserous structure under the peritoneum. She had never complained of cough or pulmonary disease--but to satisfy myself of the non-implication of the

lungs, I made several sections of them, but discovered no tubercles or other sign of pulmonary disease. The whole force of the malady seemed to have expended itself in the abdominal cavity. She was sick some nine or ten months—that is, from the period of cessation of her menstrual flow, the time from which she had dated her illness. All of my cases were young women, ranging from 18 to 21 or 22 years of age; and in all the very first complaint was a suppression of the menses, which never returned throughout the subsequent progress of the case.

At first the patient does not feel sick or make any complaint, but having missed one or two catamenial periods, she becomes concerned and applies for something to restore the lost uterine function. After a longer or shorter interval, other symptoms come; such as a feeling of discomfort, wandering pains in the abdomen, a severe stitch in the side frequently recurring, a fit of nausea or vomiting, or diarrhœa alternating with constipation. The pain is not lancinating, or of that character that distinguishes ordinary peritoneal inflammation, and is unattended by fever, unless it happen to be accidental or an intercurrent one. It is such a pain as a hysterical or dyspeptic woman is apt to have, consequently it is likely not to occasion alarm. The appetite continues good, with occasional interruption by nausea or vomiting. The skin is natural. In a word, the patient does not think herself very sick, and attributes any discomfort she may feel to her menstrual irregularity. After a time, the abdomen swells, and finally presents unequivocal ascites. The case is worse than had been thought. There is obscure organic disease of grave import, but what organ is the sufferer? Attention is naturally turned to the liver, and diligent search is made in this locality. All the abdominal viscera are inquired after in turn, according to their importance, in the hope of finding the affected organ, but in vain. We re-examine with still greater caution, till every gland, every function, every tissue whose derangement or disease might induce the result, however distant from the locality, have been questioned with the greatest caution and circumspection; yet with the same unrequited labor. There is no hepatic, renal or cardiac disease that can be discovered; no history of an old peritonitis; no story of having "caught cold" by lying on damp ground—which means a sudden interruption of transpiration, the occasional cause of acute abdominal dropsy; whereas this affection of which I speak is chronic, and comes on without any assignable cause.

The ordinary remedies will generally remove the effusion, but fresh accumulations take place, and each successive time become more difficult of absorption. It continues to progress. Digestion becomes more interrupted; the nausea and vomiting more frequent; the abdominal uneasiness augments. The skin perhaps is dry, the tongue coated, the pulse quick, the urine scanty and high colored, the abdomen hot. If sudden pressure be made upon it, the recti

muscles quickly contract, to ward off pressure from the underlying organs. Pain locates itself more intensely at a certain spot. To all appearances the case is now culminating. Inflammation has all at once revealed the hidden enemy; and what had been confused and tangled in the chain of morbid phenomena is suddenly understood and referred to inflammation of the liver, or of the stomach, or of the intestines, &c. &c., as the specialty of the symptoms may have determined.

The patient is now really, and is believed to be, dangerously ill. She is accordingly mercurialized, opiated, blistered, &c., as the symptoms may indicate or the emergency require. I don't think any one would bleed these cases. Presently the violence of the symptoms begins to abate, the fever to decline; the skins grows moist, the tongue clean, the urine clear and more abundant, and the bowels soluble; appetite returns, and the spirits rise. The patient begins to get strong, to sit up, to walk about; perhaps to attend to light household duties. But the rebound is not complete; the patient seemingly loiters on the threshhold of health, and will advance no farther; the injury to the organism is too vast to admit of it. Some how, she wont get quite well. Presently there comes the miserable relapse. She complains of a pain here, or there, or there, till first one then and another of the various abdominal viscera have been accused in turn of inflammation or other serious disorder; diarrhœa sets up its work of reduction, and what with deranged digestion and febrile irritation, the powers of the system are rapidly reduced—emaciation becoming daily more conspicuous.

If the hand be now laid on the abdomen it will be found intensely hot and drum-like; hectic is fairly set in, and this enemy allows the invalid no rest. But while life is thus hopelessly compromised and speedy death inevitable, yet, strange and incomprehensible, nature seems frequently to marshal her forces afresh and recover some of the lost ground. Thus, when daily expecting the death of the patient, we may hear of her getting better. But the effort is more spasmodic than formerly; if there was too much damage to important organs inflicted by the first attack of the disease to admit of recovery at that early stage of the malady, now more than ever is that end unattainable, as there have been fresh accessions of injury, embracing new organs and textures, perhaps equally necessary to the maintenance of life; therefore the counter-current soon sets in, till, finally worn out by combined hectic irritation and starvation, the patient passes out of life. Thus perished my first patient.

The second one died more quickly, seemingly destroyed by the violence of the excessive inflammation which the tubercles occasioned; she lived several months, and died suddenly of suppression of the urine, passing off in profound coma. For some time she had suffered from renal symptoms, discharging a small quantity of bloody urine, attended by considerable pain. A few days before the fatal

issue, it stopped altogether. She was a colored girl, tall, good looking, and of healthy appearance. A *post-mortem* examination revealed myriads of miliary tubercles lining the cavity of the peritoneum. They literally covered the bladder and the kidneys, and were florid with the recent congestion. Very little adventitious membrane could be seen, but there was considerable bloody serum. The inflammatory action had not been sufficiently intense or prolonged for the evolution of this product. She died in the first stage. When it runs its full course, the various abdominal organs are bound, glued and matted together by bands of this material, and very offensive pus may also be present. When the abdominal walls are fastened down upon the intestines or other viscera by adhesions, it may occasion tumors that give rise to great perplexity and error in the diagnosis. Having committed this mistake myself, I mention it to put others on their guard. It was the first case of this form of disease that came under my own observation, and on account of my inexperience was the source of more trouble to me than all of the rest combined. The patient was a young woman of 18 years. Her parents sent for me to ascertain the cause of her continued menstrual suppression—it was now over three months since her last catamenial flow. The abdomen was also swelled. The suppression of the menses and the abdominal swelling had come on without any cause she could assign. She had a healthy look; her pulse was natural, her skin comfortable, and her appetite good. I wont say what was my suspicion—but when I came to examine the abdomen, to my infinite surprise I found that it fluctuated. Beyond a question there was fluid within the cavity of the peritoneum, and a little pains assured me it was not ovarian. The abdominal walls were uniformly distended, and the fluid shifted according as she changed her position. But how came it there? This was a problem difficult to solve. She had never suffered from peritonitis, or any kind of intestinal inflammation; there was no disease of the liver that could be discovered, nor of the heart, nor of the kidneys, nor had it resulted from a sudden chill, nor was there any anæmia to add its suggestion. Then how was it occasioned? To say that it resulted from some disturbance of the equilibrium between peritoneal secretion and absorption, was to make it as indefinite as ever, unless I could trace it to a disease of the peritoneum *per se;* this I could not do, as there had been no former peritonitis nor present tenderness; therefore I adopted what I then considered as the most plausible conclusion—that it resulted from some obstruction of the portal circulation; and whether this was hepatic or extra-hepatic I was forced to leave for future determination.

I prescribed brisk saline cathartics, alternating with the compound diuretic pill of squill, digitalis and calomel. Some eight or ten days afterwards, I found considerable tympanitis, and whilst I was sitting by the bedside conducting my examination, her mother approached

me and asked "why her abdomen sounded so hollow, if it was full of water?" I told her that it had been removed, and gas had taken its place; that the medicine had acted well, and her daughter was much better. This was a most sagacious woman, and I therefore was careful not to excite her fears unless I could satisfy her curiosity; but to be frank and honest, the tympanitic condition was even a deeper mystery to me than the dropsy had been. I could not understand it. It seemed to me to be a most novel case; but I did not feel alarmed for her safety, as her general condition was good, and there was very little abdominal uneasiness—not enough to cause suspicion of inflammatory action. She had occasionally felt nausea, and had vomited once or twice. The discharges from the bowels were still copious. Her tongue was a little furred. Her appetite had also suffered impairment, but there was no fever. She informed me that she was "very restless at night and could not sleep." I ordered a small pill, composed of equal parts of the mild chloride of mercury and opium, a half grain of each, morning, noon, and night; at the same time enjoining quiet, and simple but nutritious diet. She continued to improve, and was soon convalescent from her singular attack, as I believed, and I accordingly stopped visiting her. But I was mistaken, for she stopped short of complete recovery, and sent for me again, under a relapse, several weeks later. There had been a fresh accumulation of serous liquid in the cavity of the peritoneum. Of late she had suffered from irritable stomach, and was vomiting more than formerly. She was also constipated. There was considerable pain in the right hypochondrium, and pressure under the ribs greatly augmented it. At this point there was a feeling of distension, associated with deep throbbing pain. The pulse was excited, and she complained of thirst; the tongue was sharp, with red edges, and densely coated along its middle. I at last became fully satisfied that she was then laboring under acute hepatitis, and considering her former obscure symptoms, came to the conclusion that she had had the chronic or subacute form from the first, and it had betrayed itself by this sudden outburst or overt action; that somehow the ascitic collection was intimately associated with it, bearing the relationship of effect and cause. I accordingly treated her for acute hepatitis; I combated the most serious symptoms, and they were hepatic. She was many weeks in bed, and suffered much—had lost considerable flesh, and was broken down in body and mind, her face written over with the record of past suffering; she asked for articles of food fretfully, or with a sigh; she looked the confirmed invalid; she was better than she had been, but I despaired of her life. Wonderful to narrate, this patient began gradually and slowly the work of recovery. It was a long time before she walked her room with anything of ease or comfort. The serous collection, which had resisted every means made to dislodge it, suddenly disappeared of its own accord; so was it with other grave symptoms, one after an-

other departing as she continued to gain. She boasted of her appetite, of her returning strength, of her improvement generally. Alas! it was only a truce, for she very soon sent for me again, with worse symptoms than ever; this time she kept her bed till she died. Hectic now set in, to add to her debility and discomfort.

It was during this last phase of her malady that one day, whilst I was ascertaining the condition of her abdomen, I noticed a tumor in the right iliac region; it fluctuated, and was about the size of a cocoa-nut, containing perhaps a quart or more of liquid. No position in which I placed her succeeded in dislodging it. It was evidently sacculated. I could not resist the conclusion that it was ovarian dropsy, and I blamed myself for not having noticed it before. But when did it come on? This she did not know, but said "she had thought she had been swelled on that side for some time." Her abdomen was intensely hot, and pressure gave her pain; her stomach was very irritable, and she vomited often; severe diarrhœa alternated with constipation. This last symptom I had noticed throughout her entire illness, and I believe it a very valuable one, as it was also present in an equal or less degree in the other cases. One day I was vastly surprised, on examining the supposed ovarian tumor, to find that it contained gas instead of a liquid. I was truly amazed. A few weeks after this she died, when I discovered the phenomenon had had its origin in the formation of an adventitious cavity, caused by singular adhesions of intestines, bladder, omentum and abdominal walls. It contained gas and a little bloody serum. Outside of this cavity, everything was bound, glued, and tied together in a confused mass, fœtid with pus. It beggared all description. Nothing escaped; not an organ or tissue in this cavity but showed marks of disease. The wonder was how she had managed so long to survive such ruin. The same answer would apply here as is given in cases of tuberculosis pulmonalis, where the organic structure of both lungs is nearly entirely destroyed—that the morbid change has been gradual, allowing the system opportunity to accommodate itself to each successive injury, thus in a manner becoming habituated to diseased action.

In conclusion, I will add, that whilst this affection is probably a form of scrofula, yet the cases that have come under my observation had not previously given any evidence of strumous cachexy; on the contrary, the patients were healthy and well developed, and consequently I was little prepared for such a denouement.

Washington, D. C., April 29th, 1865.

Among the men transferred to the Veteran Reserve Corps, in the U. S. service, during 1863, disease of the heart existed in the ratio of 69·30 per 1000, or 1 in 14·4; it also caused, in the first two months of the year, the discharge of 137 per 1000 from the service.

SUDDEN DEATH IN LABOR. AIR IN THE VEINS SUGGESTED AS A CAUSE.

[Communicated for the Boston Medical and Surgical Journal.]

MESSRS. EDITORS,—My attention has just been attracted to the account, in your issue of the 20th inst., of a "Sudden Death in Labor," and to the editorial comments upon it, wherein you invite an expression of opinion from others. My own belief, as far as it can be founded on the meagre details furnished, favors the *admission of air into the veins* as the cause of death. Indeed, the facts given—the "sound" heard by the patient and her husband, the exclamation of affright, the convulsive spasm, and the death, so sudden as to preclude any attempt at assistance—are in striking correspondence with the prominent symptoms in well-attested cases of death from this cause. The symptom most suggestive of apoplexy, viz., the turgidity of the face, has also been present in a portion of the cases of accident from the admission of air; as, for instance, in those reported by Dr. John C. Warren, and in the abortion case given by Dr. Hitchcock, of Kalamazoo.

As to the *modus operandi*, we may conclude, either that the membranes remained intact, and that, on their recession into the uterus as that organ relaxed, simultaneously with the termination of the pain, air was sucked into it from the vagina, and carried through the uterine sinuses into the circulation; or, adopting your theory, that the membranes were ruptured, and that the sound heard was chiefly or wholly due to that, infer that, in consequence of this sudden collapse, the air found entrance to the cavity of the uterus, and thence to the general circulation. Perhaps the latter alternative is the most probable; but either may be accepted as the possible result of a rare, but easily conceivable, combination of favoring circumstances.

It is much to be regretted that medical men do not more generally bear in mind the possibility of this accident in obstetric practice, that the signs and symptoms in suspected cases may be more closely observed, and the suspicion, if possible, verified or disproved by *post-mortem* examination. To further this end, please give this communication a place in your pages, even though my view of the case in question should not satisfy your judgment.

Yours, &c., J. S. GREENE.

Dorchester, April 28th, 1865.

[The suggestions in the above communication will command the attention of every reader. The case referred to was of so appalling a nature that its discussion must be of general interest. Since receiving Dr. Greene's communication, we have refreshed our recollection of his excellent article on "Air in the Veins as a Cause of Death," published in the *American Journal of the Medical Sciences* for January, 1864, and must frankly admit that there is much plau-

sibility in the theory which he offers in the present instance. We can easily believe it possible for this fatal accident to have happened in the manner suggested. It is to be observed, however, that the complaint of the patient and the appearances observed are not like those usually noticed in these cases. Generally the patient complains of feeling faint, and falls into a fatal syncope, with the usual phenomena of that condition. In the present case, the head was complained of as the seat of the distress, and this was accompanied by great lividity of the face. The facts reported are unfortunately too meagre to enable us to speak with very great confidence of either theory as the most probable explanation of the sudden death. We would refer our readers to Dr. Greene's paper in the *Journal of Medical Sciences* for much valuable information on this important subject. It contains the Kalamazoo case, above spoken of. In this patient, at the autopsy, air escaped from one of the vessels leading to the heart, from the slipping off of a ligature while removing that organ.

Another correspondent calls our attention to an interesting case of sudden death in labor, reported in the *American Journal of the Medical Sciences*, January, 1854, in which death was caused by rupture of the right pulmonary artery where it passes under the arch of the aorta.—Eds.]

RUPTURING THE MEMBRANES AS A MEANS OF FACILITATING LABOR.

[Communicated for the Boston Medical and Surgical Journal.]

Messrs. Editors,—As enough, perhaps, has already been said upon the subject of the cases of "Sudden Death in Labor," and as, in my opinion, the most probable cause of the deplorable event has already been explained by an able writer, I should have deemed it inexpedient to occupy a space in your Journal in reference to it, had it not been for the fact that my friend Dr. J. Gardner, in his communication of the 4th inst., has, inadvertently, no doubt, misrepresented my meaning upon the *subject of rupturing the membranes.*

Having been brought before the medical public in a false, and, as I consider, rather unfavorable light, I am induced to send you for publication the following explanation of my views upon the subject. The conversation referred to by the Doctor grew out of the narration of the following case. I was called in consultation to see a woman in labor who had given birth to a number of children without any unusual difficulty. I found that she had been in labor some twenty hours or more, and that, during half that time at least, she had suffered very much from hard, irregular pains, attended with restlessness and impatience. The attending physician told me that no perceptible progress had been made in the labor for many hours; and as he had been in attendance all night, he was not less impatient than the

woman. Upon examination, I found the os internum fully dilated; the head was resting at the upper strait, and a somewhat large bag of membranes was forced into the vagina at each pain. My advice was to rupture the membranes, which, by request, I did. The membranes were tough, and were not ruptured without some difficulty. Immediately after the escape of the liquor amnii, the pains became more efficient, the head descended into the pelvis, and it was evident that the child would soon be born. I resigned my seat to the attending physician, and in a few minutes the labor was successfully terminated.

This case was narrated as an exception to the general rule; and I certainly did not mean to be understood to say that I "was in the habit of rupturing the membranes as a means of expediting labor," without a due regard to the existing conditions of the case. The Doctor will no doubt recollect a still more recent conversation upon this subject, in which I fully concurred with him in the opinion, that when rupturing the membranes was practised as a general rule, more cases would be retarded than expedited, and that I most emphatically remarked that I was always extremely cautious about doing it in a primipara. The only difference between us is, that he mistook the exceptions for the rule, a matter of no serious importance, except that inasmuch as he has referred to me as authority, after an acquaintance of forty years, others who have not known me might be led to follow his example. The views of men of long experience must have more or less influence upon the practice of the inexperienced; hence whatever opinions are advanced, or modes of practice advocated in public journals, should be based upon correct principles and sustained by ample observations, and I am therefore unwilling to take the responsibility of having my name, however little influence it may have, brought before the public as an advocate of what I consider to be an erroneous practice. As the discussion upon the cause of the sudden death in labor has incidentally turned upon the subject of rupturing the membranes, though I really see no connection between them, I will briefly remark that, as a general rule, nature accomplishes her work best when least interfered with. Parturition is an organic function, which the Author of nature has not deemed it expedient to trust either to the volition of the woman or the manipulations of the doctor; and I am well assured that those physicians who "generally rupture the membranes" will ultimately be forced to the conclusion that more cases are retarded by it than expedited.

It is not, in my opinion, evident that under ordinary circumstances "just so much force as is expended by the uterus against the resistance of the membranes is just so much expulsive force wasted and so much time lost;" neither is it evident to me that "when the mouth of the uterus is dilated, or even dilatable, the membranes have performed every duty they can perform." On the contrary, I

am well convinced, by ample observation, that they perform an important office, in an inimitable manner, of distending the vagina, and preparing the way for the easier descent of the head, especially in first labors; and that the stimulus of distension, even when the membranes are pressing upon the perinæum, gives an efficiency to the pains that more than counterbalances any benefits derived from their rupture. Bedford regards quick births as dangerous, and advocates rupturing the membranes to retard the labor; and Dewees, to abridge it. While, as a general rule, it is the most natural, safest and most expeditious practice to allow the membranes to rupture spontaneously, it must be conceded that this rule is liable to more exceptions than most general rules of practice. The quotation from Cazeaux, whether intended as such or not, is a very good description of an exceptional case.

In addition to the case heretofore related, I will add another, though I fear this letter is already too long. On the morning of the 6th inst., I was sent for at three o'clock to attend a young woman in her second confinement. I learned, on my arrival, that she had had occasional pains all the fore part of the night. At two o'clock they had become much harder, and there was a moderate discharge of blood. The head presented. The os uteri was about the size of a silver dollar, and somewhat rigid. The membranes were tense during the pains, but did not protrude through the os. I waited four hours, making during that time two or three examinations, to ascertain the progress of the labor. The pains had now increased in severity; the os was fully dilated, and the head was still floating. The membranes were tense and apparently contained a large quantity of water, but were not forced down into the vagina by the pains. Having attended her before, I knew that the pelvis was amply capacious, and the soft parts were moist and yielding.

This seemed to be a case in which the labor might be advantageously hastened by rupturing the membranes, and the result justified the practice. A large quantity of water was discharged, the pains became more efficient, the head descended immediately into the pelvis, and notwithstanding that the child was very large, the labor terminated in less than an hour afterwards. When the child was born, the retarding cause became evident. The funis, though of usual length, was wound so many times around the neck that the part which was free, was not long enough to allow the child to descend until the capacity of the uterus was lessened sufficiently to admit of its acting more directly upon it, and as the membranes were unyielding the labor was thereby undoubtedly retarded.

In conclusion, allow me to remark, that general rules are useful, and frequently aid us in the choice of means in the discharge of our duties; but in the almost infinite variety of cases with which we meet in general practice, we should often find ourselves inadequate to an emergency if we were not familiar with their exceptions.

Providence, May 15th, 1865. GEO. CAPRON, M.D.

QUININE.

THE practice of medicine had its origin in empiricism, and by empiricism it is nourished still. Empirical were its foundations in the days of old, and empirical it is now. Had we the courage to make this declaration *vivâ voce* in medical society, what a chorus of indignant remonstrance it would call forth! The practice of medicine, we should be told, is scientific, it is rational, it is philosophical, it is eclectic, it is—what you please that sounds fine, but empirical! Fie on the word; it's a libel on progress and the nineteenth century! Did we preserve our presence of mind sufficiently through the storm, we should reply, There is some truth in all that you say, gentlemen; nevertheless we repeat "the practice of medicine is empirical." We grant that there is a science of medicine; physiology and pathology are scientific; and through them the diagnosis of disease is scientific. Our knowledge of the causation of disease, our recognition and comprehension of morbid conditions, and of the various forces and elements at work in the production and progress of diseases have all made great advance, and so far we have the right to call ourselves scientific; but when we come to the *treatment* of disease, to practical medicine, we say that we are empirical still, or perhaps it would be more exact to say that the *practice of therapeutics* is still very largely empirical, for the term "practical medicine" is often used to express both the science and art of medicine. Let us speak, then, of therapeutics. Of how many medicines can it be said that we know *how* they act on the system?

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Every point that we would call attention to in the practice of therapeutics may be illustrated from the history of the use and disuse of quinine. Sir Henry Holland, in one of his admirable little essays,* says:—"Conclusions, requiring for their authority a long average of cases, carefully selected, and freed from the many chances of error or ambiguity, are often promulgated and received upon grounds barely sufficient to warrant a repetition of the trials which first suggested them. . . . During the last twenty years, omitting all lesser instances, I have known the rise and decline of five or six fashions in medical doctrine or treatment." For an illustration of this, read the valuable papers we are now publishing by Inspector-General E. Hare, on the treatment of malarious fevers. Years ago Lind, Jackson, and others pointed out that bark was the only trustworthy remedial agent. Dr. Jas. Johnson went to India in 1804, found that in one case that bark failed to cure—not because its action was inefficient, but, being vomited, its action was not obtained; he tried bleeding, and the patient recovered; at once he rejected altogether the use of bark, and inaugurated a system of treat-

* "Medical Notes and Reflections," by H. Holland, M.D., &c. 1839. P. 2.

ment by copious depletion, ℈i. doses of calomel, and mercurial inunction to salivation. This method rapidly displaced entirely the treatment by bark. Now, again, quinine is recommended. Mr. Hare's experience and teaching is—"Quinine may also be given in the largest doses, whether there are head symptoms, delirium, coma, or pain in the liver. Whether it be in the hot stage or cold, quinine is not only safe for all forms of malarious fever, but it is certain cure; and in cases where there is danger to life, the earlier and the larger the doses of quinine which can be given to the patient the better. Vomiting and cinchonism were my only checks for continuing it in full doses."

These are almost the very words of the great authorities for the employment of bark eighty years ago. Dr. Clarke, who practised in Calcutta in 1768–1771, wrote:—"As soon as the intestinal tubes have been thoroughly cleansed, the cure must entirely depend upon giving the Peruvian bark in as large doses as the stomach will bear, without paying any regard to the remissions or exacerbations of the fever." Dr. Lind says:—"Although I annually prescribed upwards of 140 pounds of bark, I never observed any bad effects. The greatest—indeed, and the only—evil arising from the bark that has fallen under my observation has been to excite sickness and vomiting during a paroxysm." But all their teaching was utterly forgotten in favor of depletion and salivation. After a time, the frightful effects of the profuse salivation in vogue led, chiefly through Sir Jas. Annesley, to a more moderate use of mercury; but *en revanche* depletion was still more freely used, and culminated under Dr. Twining. His use of the lancet was indeed "heroic," and the results as truly tragic. Quinine began to be used very cautiously and gingerly about 1839; but the treatment of Clarke, Lind, &c., remained forgotten till Mr. Hare happily inherited some of their works in 1843, when he was practising in a district in which malarious fever reigned in the most deadly form, and he had the courage and good sense to use quinine as they had used bark. With what splendid results our readers must gather for themselves from his papers, which we earnestly recommend to their notice; they are full of interest and instruction. Mr. Hare finds quinine, then, *the* cure for every form of malarious fever—for every form, indeed, of Indian fever, according to him, as we find it *the* cure for malarious fever at home; but how or why it cures we know not, nor why it fails when, as sometimes happens, it does fail.

From Mr. Meller, the Surgeon to Dr. Livingstone's expedition, we learn that in the treatment of the fevers of the Zambesi it seems to fail altogether; why? is the fever not truly malarious? or is it caused by a new kind of malaria—a malaria not amenable to quinine?

If we look back into medical writings of the last century, we find that bark, bark and ammonia, or bark and soda was used in many

diseases in which *we* have not been accustomed to give quinine, but for which that medicine is now being largely recommended. It is, indeed, very remarkable how widely the use of quinine is being extended. Mr. Peter Hood* relies entirely upon it, after an emetic and a purgative, for the treatment of scarlatina in all its varieties.

Dr. Pursell† also "has obtained a remarkable amount of success" by relying on quinine or cinchonine for the cure of scarlatina in its mildest and in its very worst forms. It is his sheet-anchor in the treatment also of measles, smallpox, whooping cough, diphtheria, croup, laryngismus stridulus, chorea, erysipelas, rheumatism, acute and chronic, gout and neuralgia. In his treatment of some of these diseases, quinine appears to us to play but a very secondary *rôle;* thus, in erysipelas and rheumatism opium is largely given, to the full as freely as the quinine; and in both rheumatism and gout alkalies are freely administered. In the exanthemata, however, quinine is *the* remedy with him.

We have heard of cases of acute pericarditis and bronchitis being "cured" by the early and liberal use of quinine; but we need not quote books nor adduce examples to show the number of diseases for which quinine is regarded now as a remedy, the experience and the memories of our readers will supply proofs enough. But how is this extended and extending use of quinine to be explained? Dr. Ainstie speaks of quinine as acting by promoting nutrition; it "improves the quality of the blood, and strengthens the systemic circulation." We suppose he would say that it acts as a stimulus on the nervous system; is it thus that it cures scarlatina? Some authorities trust only in ammonia in that malady, and ammonia is a "pure and powerful stimulant." But then Dr. B. W. Richardson would give a very different explanation of the action of ammonia; he would say, if we remember rightly, that it benefits by increasing and preserving the fluidity of the fibrine in the blood.

Is it given because of its power against malaria? It has often been pointed out that we may use remedies as a test of the nature of diseases. Sir H. Holland, for instance—not to quote older and more hackneyed authorities—in the work we have already referred to, speaking of the value of bark in anomalous varieties of intermittent disorders, says, "it enables us to denote and class together symptoms apparently the most remote in kind, but which could not thus be relieved unless depending on some common cause." Shall we believe, then, that the value of quinine in so many diseases depends on their having a common origin in malaria? Dr. Handfield Jones believes that malaria plays a much more general and impor-

* "The Successful Treatment of Scarlet Fever, &c." By P. Hood. London: Churchill. 1857.

† "Exanthematous Diseases: their Rational Pathology and Successful Treatment; to which are added Remarks on Whooping Cough, Diphtheria, &c." By J. Pursell, M.D. Also a pamphlet on "Rheumatism, Gout, Sciatica and Neuralgia," by the same Author. London: Churchill & Sons. 1864.

tant part in the causation of disease than is generally believed; and in the admirable "Report of the Medical Officers of Health of St. George's, Hanover Square," for the year ending March 31, 1864, we find the following observation:—"We will content ourselves with one practical remark about the maladies which cut off such frightful numbers of elderly people in January and March. Cold is the great agent, but cold is not all. People 'catch cold' who are never exposed to it. There is a malaria in addition to a low temperature, and in all probability a more liberal use of quinine would render the other remedies employed more efficacious." We can scarcely think, however, that we are verging on a universal malaria theory of Medicine.

Is quinine given in all these diseases as an anti-periodic? This seems to be Dr. Pursell's reason for his use of it. Are we about to swallow whole the "chrono-thairmal" system—the "great therey of perriodeecity and remittency of all diseases"?—that monstrous and absurd expansion of the old, old fact that in all diseases there are more or less marked evening exacerbations, and the well-established law of diurnal ebb and flow, so to speak, of vitality in the human system, as inflated and expounded by Dr. Sampson and the well-known physician of whom he is the representative rather than the caricature?

Explain it how we will, and be it remarked that the two last suggestions will not explain *how* quinine acts, but only the theory on which it is given—explain it how we will, or explain it not at all, it is a fact well worthy of study that the field of disease in which quinine is held potent for remedial power is largely extending. We commend this fact to the careful observation and thought of our brethren. Fashion, hasty generalization, exaggerated deduction, &c., may partly account for it, but there must be some basis of truth, and this we ought to strive to draw forth by renewed, careful and scientific observation and research—*London Med. Times and Gazette.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, MAY 25, 1865.

THE STARVATION OF PRISONERS.—If this last of modern wars, now so happily ended, has shown how great has been the advance towards perfection in the art of warfare by an enlightened and inventive people, it has none the less clearly demonstrated how stationary remain man's capabilities for evil in all time. Moved by disappointed ambition, hatred and revenge, cultivated men of the nineteenth century have proved to be as thoroughly brutal and unchristian as the lowest savages in Africa. The murder of our gentle President was the last of a series of the most inhuman acts that human beings ever devised,

but it was far from being the worst of them. In the midst of the judicial investigation which appears to show beyond question the complicity of authenticated and important rebel agents, if not of the chief himself, in this long-planned assassination, the details of a still fouler plot are brought to us. Failing in their designs to burn the inhabitants of our prosperous cities in their beds, the rebel emissaries conceived the monstrous plan of calling the pestilence to their aid, and one of our own profession among them, if it can be believed, was found vile enough to go to its haunt and procure the means of spreading it among the crowded capitals of the North. The Bermuda authorities can scarcely be charged with any exaggeration or over-friendliness to us in their account of this matter, for the accomplice in this fiendish attempt was committed to jail in default of bail of only fifty pounds.

But far exceeding any of these crimes in malignancy and depravity is the process of maiming or slow death by starvation and exposure, which has been systematically practised upon the thousands of our poor fellows in southern prisons. Concerning the acts and the guilty agents in this instance there can be no possible doubt; the rebel authorities, civil and military, are personally responsible for this most cruel and wholesale murder. The horrors of Belle Isle and of the slaughter-pen at Andersonville, where many thousands of our soldiers were slowly starved to death, have been published to the world by the Sanitary Commission, but scarcely any notice has been taken of these barbarities abroad. Some of the latest English journals, in the very numbers in which they express the utmost horror of the last assassination, deny the truth of these statements altogether, and assert that an act of charity on the part of the rebel government, in setting free a few sick prisoners, that they might see their homes once more, has been basely perverted in this manner by the northern press. Fortunately, we are able to support these statements, perfectly accurate in every particular, by other testimony of a character which English medical journals, at least, will not dare to question. In March of the present year 9000 returned prisoners were received within our lines at Wilmington, N. C., of whom 2500 were in such a state that they could not be moved farther north. Dr. J. C. Dalton, Professor of Physiology and Microscopic Anatomy in the College of Physicians and Surgeons, New York, and author of the widely-known treatise on Human Physiology, and Dr. C. R. Agnew, of the Sanitary Commission, were selected to visit them and examine into their condition for the purpose of determining whether they were suffering from disease or in consequence of starvation and exposure. The latter gentleman in his report states:—

"I had several interviews with citizens of Wilmington who had seen our prisoners as they were brought into the city for exchange, with a view of ascertaining what their impressions were, as to the motives which influenced the rebel officers in the management of squads in their respective commands. I found that some of the rebel officers in charge of our returned prisoners had permitted the citizens to furnish them food, while others had forbidden all access to the pens in which the men were quartered; and one, a rebel captain, having charge of about a thousand men, had gone with his drawn sword and

knocked the food from the hands of the famished men, informing the citizens who had furnished it, 'that the best thing that could happen to the Yankees was to be starved, and thus expiate the crime which they had committed in invading southern territory and destroying the peace of southern homes.'"

Dr. Dalton spent two days in visiting the hospitals containing the returned prisoners, and says :—

"But the greatest and most pitiful necessities were among our returned prisoners. No description can do justice to their miserable condition, because nothing but an actual inspection of them, in considerable numbers, can show that the wretched faces and figures that present themselves everywhere are not the isolated and exceptional effects of severe illness, but the general result of a uniform and long-continued process of starvation and misery. There were degrees, of course, in which this condition was more or less marked. The better cases were walking about the streets, perhaps barefooted, or with no other clothing than a pair of white cotton drawers and an old blanket or overcoat, both equally ragged. In these, the slow, dragging gait, listless manner, and cavernous, inexpressive look of the face, together with the general emaciation, formed a peculiar aspect by which they alone attracted the attention of the passer-by, and by which they were at once distinguished from the other convalescent soldiers. There was no occasion to inquire in Wilmington which were our returned prisoners; after half a day's experience, any one could distinguish them at a glance. Many of them, who had strength to crawl about in this manner, were prevented from doing so by the want of clothing. Major Randlete, the Provost Marshal of Wilmington, told me that on one day forty of these men came into our lines *absolutely as naked as they were born*. I inquired of a considerable number of them, whom I saw in the hospitals confined to their beds—naked or with only a shirt, and covered with a hospital blanket—what had become of their clothing, and was told that they had thrown away what remained as soon as they could obtain shelter, because it was so ragged, filthy and full of vermin. One of them, on being told that the Sanitary Commission had sent them flannel shirts and drawers, caught at the word with a childish eagerness, and repeated the good news to his companions with a faint, half-imbecile smile as long as I was within hearing. With the great majority of the feebler ones, personal cleanliness was a thing which they appeared to have forgotten. They no longer retained sufficient strength either of mind or body, to appreciate or correct the degradation to which months of unavoidable uncleanliness had reduced them. In the most extreme cases the condition of the mind, as well as the expression of the face, was absolutely *fatuous*, and the aspect of the patient was not that of a strong man reduced by illness, but that of an idiotic pauper, who had been such from his birth. Nevertheless, several of the surgeons informed me that the condition of the patients had visibly improved since their reception, and that I could not then form an adequate idea of what it was when they entered our lines. In that case it must have been lamentable beyond description.

"The testimony of both men and officers was uniform as to the causes of their unnatural condition. These causes were—1st, starva-

vation; and 2d, exposure. Only such officers and men as could procure money were able to obtain anything like sufficient nourishment. Some of them told me that during the entire winter they had received absolutely no meat; a pint of corn-meal, often with the cob ground in, sometimes with and sometimes without salt, a handful of 'cow peas,' and sometimes sorghum molasses, constituted their usual ration. When in hospital, they had only very thin corn-meal gruel and a little corn-bread. To the debility occasioned by this insufficient food was added that resulting from exposure. It was a common thing for a prisoner, immediately on being taken, to be stripped of his clothing—shoes, socks, pantaloons, shirt and drawers—and to be left with only an old and worn-out pair of drawers, and, perhaps, an equally worn-out shirt and blanket given him in exchange. This robbery of clothing was also practised, more or less, upon officers. Even an assistant surgeon, who was captured within four miles of Richmond, told me he was robbed of his flannel shirt, while standing in front of the Libby Prison, and in presence of the rebel officer in charge of the squad. This was immediately after his arrival in the city, and when he had been, for the three days succeeding his capture, entirely without food. With the scanty clothing thus left them, the men were kept during the winter, often without any shelter, excepting such as they could contrive to provide by excavating a sort of rifle-pit in the ground, and covering it with old blankets or canvas, as their supply of fuel was insufficient and sometimes entirely wanting; even in the hospitals their suffering from cold was very great.

"One of the most melancholy sights in Wilmington was that to be seen at the 'Geer' Hospitals. In these hospitals were collected all those patients who had lost their feet, either wholly or in part, by freezing, from their exposure during the past winter, and this in a well-wooded country. In some of them, two or three toes only, on one or both feet, were gangrened, and in process of separating by ulceration; in others, both feet had entirely separated, and the patients were awaiting the time when their general strength and the condition of the stump would warrant a final amputation. In many cases the patients ascribed this gangrene directly to frostbites received on particular occasions; in others to their illness from which they were suffering—generally fever combined with exposure. My own impression, derived from the result of many inquiries, was that it was generally due to a continuous depression of the vital energies from starvation and neglect, resulting gradually in a destruction of the life of those parts most exposed to the cold and the weather."

The accompanying extract from a letter written by Dr. Agnew, dated Wilmington, March 20th, 1865, paints in such terrible colors the appearance of these poor victims of rebel hate, that we have no word to add to their appeal to the civilized world for judgment on those who permitted and those who did such deeds.

"General Abbott, who received our poor fellows in the exchange, has just told me that language would utterly fail to describe their condition. Filth, rags, nakedness, starvation, were personified. Many of the men were in a state of mind resembling idiocy, unable to tell their names, and lost to all sense of modesty, unconscious of their nakedness and personal condition. Some of them moved about on their

hands and knees, unable to stand upon their gangrenous feet, looking up like hungry dogs, beseeching the observer for a bite of bread or a sup of water. Some of them hitched along on their hands and buttocks, pushing gangrenous feet, literally reduced to bone and shreds, before them. Others leaned upon staves, and glared from sunken eyes through the parchment-like slits of their open eyelids into space, without having the power to fix an intelligent gaze upon passing objects. Others giggled and smirked and hobbled like starved idiots; while some adamantine figures walked erect, as though they meant to move the skeleton homewards so long as vitality enough remained to enable them to do so. To see the men who remain here in hospital would move a heart as hard and cold as marble. Their condition is that of men who have for months suffered chronic starvation. Their arms and legs look like coarse reeds with bulbous joints. Their faces look as though a skilful taxidermist had drawn tanned skin over the bare skull, and then placed false eyes in the orbital cavities. They defy description. It would take a pen expert in the use of every term known to the anatomist and the physician to begin to expose their fearful condition."

The late Valentine Mott, M.D., LL.D.—At a special meeting of the New York Academy of Medicine, held on Friday evening, April 28th, for the purpose of taking action concerning the death of its late President, Dr. Valentine Mott, the following committee was appointed, viz. :—Drs. Post, Delafield, Griscom, Buck, Flint, Isaac Wood and J. W. Draper, who reported the following resolutions, which were seconded by Dr. Stevens, and after remarks by Drs. Delafield, Stevens, J. R. Wood, Hamilton, J. M. Smith, Isaac Wood, Griscom, Geo. T. Elliott, and Hewitt, were unanimously adopted.

Resolved, That this Academy, in assembling to do honor to the memory of Dr. Valentine Mott, who has just passed away in a ripe old age, recognizes the fact that since its first organization, no member has been taken from among them who has filled a larger space in public estimation, as a physician and surgeon, than their deceased associate and late honored President.

Resolved, That our common country has reason to cherish the memory of Dr. Mott, not only as the greatest surgeon ever produced in America, but as one who has taken rank with the first of this century in any part of the world; as one whose reputation was indeed world-wide, and whose name is known and revered wherever our profession is found.

Resolved, That this Academy are deeply sensible of the debt of gratitude our profession owes to our late associate, from the legacy he has left us of great improvements in surgical science and art, improvements by which we are now enabled to save many valuable lives, which, without them, must have been lost, and which, in all future time, will be recognized as among the greatest achievements performed by any of its members.

Resolved, That as it is not possible in this manner to testify our sense of the high character of Dr. Mott, as a citizen as well as a surgeon, we will appoint one of our members to pronounce a eulogy on the deceased, and make a more fitting and enduring memorial of his character and virtues, and that at the meeting of the Academy held for that purpose, citizens generally be invited to attend.

Resolved, That we tender to the family of the deceased our warmest sympathies for the bereavement they have suffered, but hope and trust that, conscious as they must be, that although the head of their family has been taken from them, he has filled up the full measure of a useful and well-spent life, they have all the consolation possible in their affliction.

Resolved, That we will attend the funeral in a body, and that we invite the sur-

geons of the army and navy, and the members of our profession generally in this city and its vicinity, to unite with us in paying this last tribute of respect to the memory of our lamented colleague.

Resolved, That a copy of these resolutions be communicated to the family of the deceased, and that they be published in the daily papers.

(Signed) JAMES ANDERSON, M.D., *President*,
W. M. CHAMBERLAIN, *Secretary*.

THE following extract is taken from the Anthropological Society's translation of Marx's life of the celebrated physician and naturalist, Blumenbach :—

"No one who had once seen or conversed with Blumenbach could easily forget him ; and he knew how to make himself valuable to every one who lived with him. Even in extreme old age, when the weight of years had bent even his resisting back, there he stood and sat, as if cast in bronze, in every look a man. Any one who heard the stout voice with which he answered, 'Come in,' to a knock at his door ; or saw the wonderful play of muscles in his expressive face, and remarked in any interview his undisturbed equanimity and collectedness, and the freshness and cheerfulness of his spirit, soon knew with whom he had to do.

"No one left his presence without receiving either an instructive narrative, a cheerful story of old times, or some weighty hint. He understood a joke, and knew how to return one. If any one let slip in conversation an expression, or a suggestion, which was wanting in due consideration or respect, or if any one appeared as if he wanted to impose upon the old man, he must have been wonderfully put down when he snatched at his cap, and bared his snow-white head, with the words, 'Old Blumenbach is obliged to you.' I cannot leave untold how Astley Cooper, in 1839, said in a letter of recommendation, that King George IV. had declared that he had never seen so imposing a man as Blumenbach. * * * * * * * *

"Blumenbach never shed tears.* After a heavy domestic misfortune I found him collected, reading some travels of natural history, and calling my attention to the pictures in them. He suffered through his whole organization, yet he made no complaint, and shed no tear, but tried to occupy himself as far as he possibly could.

"He never used spectacles, and in his 88th year read with ease the smallest letters and type. His handwriting changed remarkably, according to the different epochs of his existence. In his youth and active manhood he wrote beautifully. Then he was afflicted with a difficulty of using his writing finger, and after he had tried hard to conquer it without success, he accustomed himself to write with the left hand, guiding the pen with the right. For this purpose he used

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* "Look for the lachrymal gland after my death," he said sometimes, "you will find none," or "I must have nerves like cords, or none at all." The dissection never took place. It would have been most interesting in many respects for the more accurate knowledge of the particular parts of the brain, and their connection with each other, the comparison of the skull, the windpipe, and the lungs, with the well-known symptoms which were seen during the life of the old man, who was remarkable, even in a physical point of view. Still, with respect even to the peculiarities mentioned, it must be considered that the forms hinted at were easy to be seen, and as normal as might be ; but long-continued design, iron will, and custom, which had almost become law, had made their influence distinctly tell upon them.

a swan's quill, and the thickest lead pencil. In his 87th year, however, he again attempted to write with the right hand, and the strokes by their firmness and clearness recalled the best performances of his earlier years. If you ever got him to talk on the chapter of writing, he took care never to forget to recommend the art of writing handily in your pocket, which had been of great service to him on diplomatic missions, through the agency of a short, thick lead pencil and strong parchment paper."

The Yellow-Fever Plot.—The wretch Blackburn, whose hideous crime would have secured him much more attention if we had not so many great criminals on our hands just now, is thus described by a correspondent of the *New York Tribune:*

"I suppose the now infamous Dr. Blackburn is the same burly personage I met abroad in 1857. I first saw him at Baden, then at Paris, where he was prosecuting a 'suit,' in which he distanced several rivals and won the prize. That secured, he told me he was going to Edinburgh to visit the great Dr. Simpson there. As Blackburn was really quite illiterate, I rather doubted his claim of correspondence with such a distinguished man in medical science; but he showed me the letter of invitation from the Professor, and then told me the occasion of their correspondence. He said that he had gone through several yellow-fever seasons at the South, during which he had carefully studied its phenomena, particularly in reference to its propagation by infection from clothing, &c., which facts he had embodied in notes, and from his home (Natchez, I think) transmitted them to Dr. Simpson. He went to Scotland, and was cordially received and entertained by the Professor. 'Yellow fever' was Dr. Blackburn's hobby. He told me many curious and interesting facts about it, derived from his personal study in the midst of its ravages. He has considerable native force of character, is a thorough 'Southron,' and every way is the very *monster* to devise and undertake, in 'confederate service,' the horrible scheme detailed in your columns to-day."

At the annual meeting of the Massachusetts Dental Society, held on Thursday, the 18th inst., the following named gentlemen were chosen officers for the ensuing year:—N. C. Keep, *President;* E. G. Leach, *Vice President;* T. H. Chandler, *Recording Secretary;* E. C. Rolfe, *Corresponding Secretary;* S. J. McDougall, *Treasurer;* E. N. Harris, *Librarian*; A. Lawrence, J. T. Codman, H. F. Bishop, T. B. Hitchcock, S. F. Ham, *Executive Committee.*

Dr. A. D. Sinclair has been appointed one of the Physicians to Out-patients at the Massachusetts General Hospital.

The nineteenth annual meeting of the Association of Medical Superintendents of American Institutions for the Insane will be held in Pittsburgh, Pa., on the 13th of June.

A bill to establish a State Hospital for the incurable insane has recently passed the New York Assembly.

Dr. J. Foster Jenkins has resigned his post as General Secretary of the Sanitary Commission. At a late meeting of the Commission a unanimous vote of thanks for his services was passed.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, May 20th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	38	40	78
Ave. mortality of corresponding weeks for ten years, 1853—1863,	36.3	37.6	73.9
Average corrected to increased population - - - -	00	00	80.84
Death of persons above 90 - - - - - - - -	0	0	0

Deaths in Boston for the week ending Saturday noon, May 20th, 78. Males, 38—Females, 40. Accident, 4—apoplexy, 2—congestion of the brain, 1—disease of the brain, 2—inflammation of the brain, 1—bronchitis, 3—cancer, 1—cholera infantum, 1—consumption, 12—convulsions, 3—croup, 1—debility, 1—diphtheria, 1—dropsy, 3—dropsy of the brain, 3—erysipelas, 1—typhoid fever, 1—gastritis, 1—disease of the heart, 1—infantile disease, 2—disease of the liver, 2—congestion of the lungs, 4—inflammation of the lungs, 5—marasmus, 1—measles, 1—old age, 2—premature birth, 1—rheumatism, 1—smallpox, 5—sore throat, 1—unknown, 6—whooping cough, 4.

Under 5 years of age, 29—between 5 and 20 years, 10—between 20 and 40 years, 15—between 40 and 60 years, 15—above 60 years, 9. Born in the United States, 56—Ireland, 16—other places, 6.

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EXPERIMENTAL RESEARCHES ON OPIUM AND ITS ALKALOIDS.*

BY M. CL. BERNARD.

[Translated from the Comptes Rendus, and communicated for the Boston Medical and Surgical Journal, by EDWARD H. CLARKE, M.D., Professor of Materia Medica in Harvard College.]

IN my course of experimental medicine, at the College of France, I have examined, this year, the various physiological agents, which may be used to facilitate experiments on living animals. In this way I have been led to examine the stupefying properties of opium and its alkaloids. But, during this study, I have encountered various unexpected phenomena, which I now purpose examining more closely, on account of the therapeutical and medical importance of opium.

Opium is a mixture of a large number of substances, many of which differ essentially from each other in their action on the animal economy. Since chemistry has isolated the active alkaloids of opium, many physicians have employed them in preference to opium itself. It is for the interest of therapeutics that this tendency should be greatly encouraged, as we shall see by the following results.

Many years of experimental investigation will be required in

* NOTE BY THE TRANSLATOR.—M. Bernard gave a series of lectures, last summer, at the College of France, of unusual interest, on the physiological action of certain important drugs. He discussed particularly opium and strychnia. The conclusions at which he arrived are of the greatest practical value, especially with regard to opium and its alkaloids. Notwithstanding the familiarity of physicians with opium, and the frequency with which they employ it, our knowledge of its physiological action is imperfect. In this respect, M. Bernard's recent researches promise to be of the highest importance.

When in Paris, last summer, I found that the new alkaloid of opium, narceine, whose physiological action is described in the following article, was used by physicians there with evident advantage. Since my return, I have prescribed it in several cases, and am satisfied with its action. It produces quiet and profound sleep, with a less number of disagreeable symptoms than morphine. The dose of it is from one tenth to one fifth of a grain, repeated if necessary. The most convenient form for its administration is that of pill made up with acetic acid and some inert substance. The only objection to its use is its cost, being at the present time nearly one dollar per grain. The only druggists of whom it can be obtained, so far as I know, in the country, are Messrs. T. Metcalf & Co., of this city. Should it meet with favor from physicians, as I think it will, it will doubtless be furnished at less cost and generally kept by druggists.

order to carry the study of the physiological action of opium and its alkaloids, which I have undertaken, as far as modern experimental physiology is capable of carrying it. The work which I have the honor to present to the Academy, then, is not a finished one, but only a sort of introduction, in which I shall treat, in a general and comparative manner, of the soporific and toxicological properties of six of the most active principles of opium, viz., morphine, narceine, codeine, narcotine, papaverine and thebaine.

I.—*Soporific Properties of the Alkaloids of Opium.*—Experiments upon animals have taught me, that among the six principles of opium, mentioned above, three only possess the property of inducing sleep: these are, *morphine*, *narceine* and *codeine*. The three others—narcotine, papaverine and thebaine—possess no soporific action; so that from this point of view they are not only substances foreign to opium, but are agents whose peculiar action may oppose or modify the soporific effect of the three first.

Because morphine, narceine and codeine are soporific, we must not conclude that they are identical in their physiological and therapeutical properties. Experience shows, on the contrary, that each has specific virtues, for each produces sleep in a peculiar way, and induces, moreover, a characteristic sleep. I have used morphine and codeine as chloro-hydrates, in a solution of five grammes of the salt to one hundred grammes of distilled water. Narceine, being the most soluble, I have employed directly, in a solution of the same strength.

I have given these soporific substances, sometimes by the stomach and rectum, and sometimes I have injected them into the veins, or the pleura, or the trachea, or into the subcutaneous cellular tissue.

Elsewhere, I shall examine the differences which are induced by these various modes of administration; the general results, which I am now about to describe, were obtained by injections into the subcutaneous cellular tissue. This method leads to a regular absorption of the active substance, and consequently furnishes results that are definite and capable of comparison. Indeed, it seems to me that on account of these circumstances, sub-cutaneous absorption, which has not been employed up to the present time, or, if employed, used only in exceptional cases, ought to be the general method of administering all energetic drugs in a pure state.

The injection into the subcutaneous cellular tissue of a cubic centimetre of a solution of the chloro-hydrate of morphia, of the strength of five grammes to a hundred, which consequently contains five centigrammes of the salt, is sufficient to produce profound sleep in a young dog of medium size.

Dogs of adult age, or of larger size, require a stronger dose. However, as we shall see by and by, when speaking of the toxicological effects of morphine, we can double, triple, and even decuple the dose, and thus produce a sleep more and more profound, without other

inconveniences than certain phenomena that are not dangerous to the animal.

When dogs are thus profoundly stupefied by morphine, they are like living machines that are rendered inactive, and so are very convenient for physiological observations and experiments. If they are laid upon the back in a trough they remain there for hours together, profoundly asleep and without movement. They can be kept in any position, even with the mouth open, without offering any resistance, and so can be subjected, with the greatest ease, to long and delicate physiological operations.

Though the sleep produced by morphine is very profound, and sensation is considerably blunted, at the same time that the nerves of sensibility are rendered sluggish, yet the animals are not insensible. In reality, if the extremities are forcibly pinched, the animal, at first, manifests no sensation of pain, so that he appears insensible; but if the attempt is repeated two or three times, the animal experiences pain and moves. In these conditions, and especially when the sleep begins to go off, animals show themselves particularly sensitive to sudden noises. If a blow is struck upon a table, or if the noise of falling water is suddenly produced, by opening a cock near by, the dog leaps up, and awakes in jumping; often, indeed, he gets up and runs off, as if frightened, but only to stop again directly, and fall back into the state of narcotism. If these noises are often repeated, the animal finally becomes habituated to them, and is not disturbed by them—a condition contrary to that produced by pinching, as we have stated above.

The duration and intensity of the sleep produced by morphine are naturally proportionate to the dose of the substance absorbed; but it is of especial importance to examine the manner of awakening, which is characteristic. Dogs, in coming to, always present the same aspect. They are often frightened. Their eyes are haggard. Their hind quarters droop and are half paralyzed. All of which gives to them an aspect like that of an hyena. If dogs in this condition are called, they run off as if alarmed; they do not recognize their master, and seek to conceal themselves in obscure places. These intellectual disturbances of animals sometimes continue not less than twelve hours, and only after this period do they resume their normal disposition.

If, now, we compare the sleep produced by codeine with that produced by morphine, we shall see that they differ essentially from each other. Five centigrammes of the chloro-hydrate of codeine, injected under the skin, are in like manner sufficient to produce sleep in a young dog of medium size. If the dogs are adults, or of large size, it is necessary to augment the dose in order to produce the same effect. But whatever the dose may be, it is not possible to produce in dogs so profound a sleep by codeine as by morphine. The animal can always be easily aroused, either by pinching his extremities, or

by making a noise near him. If the dog is laid on his back in a trough, he remains there, tranquil, but presents the appearance of being calm rather than of being asleep. He is easily aroused. At the least noise, he jumps upon his feet, and if a blow is suddenly and violently struck near where he is lying, he leaps up and runs off. This excitability is only the exaggeration of a condition like that which we have already seen as the result of morphine; like that, it disappears by repeated disturbance.

Codeine blunts the sensation much less than morphine. It does not render the nerves sluggish, like the latter, and, consequently, for physiological operations, morphine is far preferable to codeine. But it is at the time of awakening that the difference between the effects of codeine and morphine especially manifest themselves. Animals who have taken an equal dose of codeine, awake without fright, without paralysis of the posterior extremities, and with their natural disposition; they do not exhibit the intellectual disturbance which follows the use of morphine. Among the very numerous experiments that I have made on this subject, I will confine myself to the report of a single example, which sufficiently illustrates the differences that I have pointed out.

Two young dogs, accustomed to play together, and both of them of a size rather above the average, received, in the subcutaneous cellular tissue of the axilla, by means of a small-pointed syringe, one of them five centigrammes of the chloro-hydrate of morphine, dissolved in one cubic centimetre of water, and the other five centigrammes of the chloro-hydrate of codeine similarly dissolved. At the end of about a quarter of an hour the two dogs became sleepy. Both were placed upon the back in a trough, where they slept tranquilly nearly three or four hours. Then the two animals, being aroused, presented a most striking contrast. The dog with morphine ran around with a terrified eye and the gait of an hyena, not recognizing any one, not even his comrade, who had taken codeine, and who in vain coaxed him, and leaped upon his back in order to play with him. It was not until the next day that the dog who had taken morphine resumed his cheerfulness and his ordinary disposition. Two days after, the two dogs being in good condition, I repeated the same experiment precisely, but in inverse order; that is to say, I gave codeine to the one who had taken morphine, and *vice versâ*. The dogs slept about as long as at first, but on awakening the action of the two animals was completely inverted, just as the administration of the substances had been. The dog who two days before, after taking codeine, awaked alert and gay, was now, after his sleep produced by morphine, amazed and half paralyzed, while the other awaked active and joyous.

The sleep produced by narceine partakes of the nature of that produced by morphine, and of that produced by codeine, and at the same time differs from them both. Narceine has greater power in

producing sleep than any other element of opium. In equal doses, animals are made to sleep more profoundly by narceine than by codeine, but they are not plunged into so stupefying a sleep as they are by morphine. Their nerves of sensation, although blunted, are not rendered especially sluggish. They readily give evidence of painful sensations when their extremities are irritated. The especial characteristic of the sleep produced by narceine is the profound quiet and insensibility to noise which we remarked in morphine, and found at its greatest intensity in codeine. Animals who have been put to sleep by narceine readily return, when awakened, to their natural condition. They exhibit, only in a very moderate degree, weakness of the posterior extremities or appearance of terror. In this respect the awakening from narceine resembles the awakening from codeine.

I will add that the sleep of narceine is very convenient for physiological observations. Dogs, plunged into a profound sleep for hours, make no resistance, and, if they complain, they do not endeavor to run off nor bite.

Animals are thus put into a condition from which it would seem as if they could not be aroused. At the Society of Biology, during a session in the month of July last, I injected under the skin of the axilla of a young dog seven or eight centigrammes of narceine, dissolved in two cubic centimetres of water. In about a quarter of an hour the animal was seized with a sleep so profound, that in order to convince the President as well as many members of this laborious Society, whose transactions have been so advantageous to the advancement of medical science, that the animal was not dead, I was obliged to exhibit him at the following session.

In conclusion, each of the three soporific substances contained in opium produces a sleep which is to a certain extent characteristic. I have demonstrated this result, not only upon dogs, but also upon cats, rabbits, guinea-pigs, rats, pigeons, sparrows and frogs. In all of them the effects of the three substances present the same characteristics and the same differences, after allowing for the special susceptibility of each animal. White rats—albinos—who are very easily narcotized, also manifest, decidedly, the differences that we have pointed out between the sleep of morphine, that of codeine and that of narceine. If the bars of a cage, into which three rats have been put to sleep by these three substances, are made to vibrate even slightly, the rat that has taken codeine leaps into the air, and the two others remain quiet; if the bars are made to vibrate more strongly, the rat that has taken codeine and the one that has taken morphine leap up, but the first more than the second; whilst the rat that has taken narceine does not move and remains asleep. On awakening, the rat with codeine is the first to resume his ordinary condition; then follows the one with narceine, while the one with morphine remains for a long time stupid.

The differences which I have pointed out between morphine and codeine have been for a long time known to physicians. It has been observed, in man, that morphine produces a heavy sleep, with consecutive headache; whilst codeine produces, on the contrary, a much lighter sleep, without headache on awakening. But narceine had not yet been tried on man. Since the very exact results of my experiments, two physicians of Paris, well known for their scientific labors—M. Debout, Editor of the *Bulletin Général de Thérapeutique*, and M. Béhier, physician of the Hospital of La Pitié—have made experiments with it upon man, which agree completely with the effects of narceine that I have observed in animals. I refrain from pointing out these results, because they are in process of publication. I will only remark that, to-day, we may consider narceine as having definitely entered the domain of therapeutics equally with the two other soporific principles of opium.*

I will remark that animals, as well as man, are much more sensitive to the effects of morphine, codeine and narceine when they are young than when they are adult. They exhibit, moreover, the same rapid habituation to the soporific effects of these three substances; so much so, that in order to obtain the results of which we have spoken, it is important to select fresh animals, for I have observed that the phenomena of habituation are sometimes of long duration.

II.—*Toxicological Properties of the Alkaloids of Opium.*—The six principles of opium that I have studied are all poisons, but no relation can be established between their toxicological properties and their soporific action. I have been led to make some researches upon their toxicological action, because I have observed, in stupefying animals for physiological operations, that the gummy extract of opium was relatively more dangerous than morphine. In reality, experiments soon showed that morphine was one of the least poisonous of the alkaloids of opium, and that thebaine was the most active poison

* The following cases confirm M. Bernard's statement of the soporific action of narceine. The details of them are omitted. Only enough is given to illustrate its soporific influence.

Case I.—A lady, æt. about 30, who had been subject for two or three years to frequent and violent headaches, took half a grain of narceine, in divided doses. After the last dose, she fell into a profound sleep that lasted eight or nine hours. The sleep was quiet, and she had very little disturbance of the stomach or bowels the next day. For similar attacks, she had often taken more than a grain of one of the salts of morphine before an equally profound sleep could be produced.

Case II.—A gentleman, æt. 50, suffered from an intense neuralgia of the right arm, following an attack of acute rheumatism. I treated him with the iodide of potassium, large doses of quinine, the subcutaneous injection of morphia, counter-irritation, &c., and finally advised a journey to Europe. The prominent symptom was severe pain at night, which prevented sleep. After a varied but unsuccessful treatment in Paris, narceine was prescribed for him by M. Duchenne, and the first dose of one fifth of a grain was followed by a night of quiet sleep—more quiet and longer sleep than twice the amount of morphine had ever produced. For the past few months the same patient has repeatedly taken the same dose, with the same result.

Case III.—A lady, æt. about 50, was attacked with neuralgia of the left arm, following a traumatic lesion of the nerve. She suffered most at night, and was often deprived of sleep by pain in the arm. After a variety of treatment, I prescribed narceine. She took it in doses of one tenth of a grain. It always produced sleep, though sometimes two tenths, and sometimes three tenths of a grain were requisite for that purpose.

In all of these cases there was little or no headache or nausea the next day. There was moderate constipation, and scarcely any loss of appetite.—Translator.

among them. To give an idea of the difference in this respect between these two alkaloids, I will say that one decigramme of the chloro-hydrate of thebaine, dissolved in two cubic centimetres of distilled water, and injected into the veins of a dog of the weight of seven or eight killogrammes, kills him in five minutes; whilst I have been able to inject as much as two grammes of the chloro-hydrate of morphia into the veins of an animal of the same size without producing death. Next to thebaine, in toxicological power, comes codeine, which is also much more dangerous than morphine. The opposite opinion prevails among physicians, who clinically prescribe codeine in a higher dose than morphine. This error arises from the fact that, in ordinary use, morphine produces rapidly, and long before a toxicological dose is attained, such phenomena as headache and vomiting; while codeine, which produces little sleep, does not produce these phenomena to the same extent, though it is much more poisonous. The dose of the chloro-hydrate of codeine, which, injected into the veins will kill a dog, is much smaller than the dose of the chloro-hydrate of morphine which may be injected in the same way without producing death.

But the principles of opium are not only poisonous; they are also agents that produce convulsions—that is to say, they produce death with violent tetanic spasms. These convulsions, in certain cases, and especially after taking thebaine, are followed by an arrest of the heart's action, and a rapid cadaveric rigidity, such as occurs with muscular poisons. Narceine alone is an exception to this, for it produces neither excitement nor convulsion. Animals, to whom it has been given in a poisonous dose, die in a sort of relaxation.

At the present time I confine myself to these brief statements, for I am about to examine, analytically, each one of the alkaloids of opium with the greatest care. It is only in this way that we shall be able to find an explanation of their soporific and of their diverse medicinal actions.

Opium has already been the object of a large number of isolated experiments; but, as we see, these studies are insufficient. Each of the alkaloids of opium should be re-examined methodically and analytically, with the aids that physiological experiment places at our disposal. For this purpose I shall give a history of the researches that have already been undertaken, and which I have omitted in the general survey that I have given you to-day.

III.—*Conclusions and Reflections.*—The alkaloids of opium produce three principal actions:—1st, a soporific action; 2d, an exciting or convulsive action; and, 3d, a toxicological action.

In relation to these actions, the six principles of opium that I have studied may be arranged in the following order. As soporifics, we have narceine in the first rank, morphine in the second, and codeine in the third. The three other principles have no soporific action. As convulsives we have, 1st, thebaine; 2d, papaverine; 3d,

narcotine; 4th, codeine; 5th, morphine; 6th, narceine. As toxicological agents we have 1st, thebaine; 2d, codeine; 3d, papaverine; 4th, narceine; 5th, morphine; 6th, narcotine.

In order to obtain the preceding classifications, we must experiment upon animals susceptible of a close comparison with each other; otherwise we shall not be able to seize upon the actual shades of difference. Such is the difference, and a very slight one, in toxicological action, between morphine and narceine. It would be impossible, for example, to obtain these comparative results from dogs or rabbits, because these animals vary so much in size, age, race, &c. Equal caution must be observed in drawing conclusions from experiments on animals that have previously been submitted to the influence of preparations of opium, for the system is so easily accustomed to their action that under these circumstances a second experiment never resembles precisely the first one. Hence in physiology, more than elsewhere, and especially on account of the complexity of the subject, it is easier to make bad experiments than good ones—that is, comparative experiments. The frequent contradictions that are met with among experimenters form one of the principal obstacles to the advance of experimental medicine and physiology. Frogs are susceptible of comparison with each other much better than dogs, but they are not sufficiently sensitive for these experiments. On this account we have selected young sparrows, great numbers of whom may be found at Paris in the spring. These animals, taken from the nest, and consequently of the same age and size, may be closely compared with each other, and are, moreover, very sensitive to toxicological, soporific and convulsive influences. In order to administer these active solutions, I make use of the small syringe of Pravaz, armed with a fine and sharp-pointed tube. By this means I convey the active substance, drop by drop, into the subcutaneous cellular tissue, and do it with almost mathematical precision.

As I said at the beginning, the above is merely a sketch; and although the results that I have pointed out rest on more than two hundred experiments, yet it will be apparent that the study is only at its commencement, if we reflect that before approaching the question of the intimate action of each of these substances we must determine their effects on digestion, circulation, secretion, excretion, and explain, moreover, the singular phenomena of the habituation of organs to the effects of opiate preparations.

To-day, I desire only to draw the attention of physiologists and physicians to studies, which I look upon as the basis of scientific therapeutics. These researches are so extensive, and these questions so difficult, that the efforts of all are necessary for their resolution; and all should earnestly promote the work. Therapeutics presents difficulties enough in itself without augmenting them by employing complex drugs, like opium, that often produce a variable result.

Complex actions must be analyzed, and reduced to those that are simple and precise, by employing separate principles, and then by recombining these principles if necessary. Thus, opium will never produce the effects of narceine—that is, sleep without excitement—but it may lead to a variety of results, depending on the greater or less degree of individual susceptibility to one or another of the active principles that compose it. Experiments on animals alone enable us to make those appropriate physiological analyses, which point out and explain the medicinal effects that are observed in man. We see, in reality, that whatever we notice in man we find in animals also, and *vice versâ;* only there are peculiarities, which are explained by diversity of organization. At the bottom, the nature of the physiological action is the same. It could not be otherwise, for if it were, there would be neither physiological nor medical science.

Finally, I will close with a remark that flows naturally from the above. We see, by the example of opium, that the same vegetable may contain principles whose actions on the animal economy are different from each other, and in some sort opposed to each other. Hence, we may obtain a number of distinct drugs from the same plant. With regard to opium in particular, I think that each one of its principles is destined to become a distinct drug, especially as it contains principles which exert a very marked influence on the organism, without being poisonous in proportion to the energy of this action. Thus, for example, the chloro-hydrate of narcotine exerts a decidedly convulsive action, although it is the least poisonous of the principles of opium that we have examined. It is not a necessary inference, then, that plants of the same family possess the same medicinal virtues, when we see the same vegetable furnishing active products whose physiological properties are so varied.

MOLLUSCUM CONTAGIOSUM.

Real "Molluscum contagiosum" is such a rare disease that a few remarks on a curious case of this affection which was lately observed in Professor Ebert's clinique may be of interest. The patient was a little girl, aged 4, of scrofulous habits, who had two years ago suffered from caries of the os cuboideum; soon afterwards small tumors of a size varying from that of a pea to a walnut appeared on the eyelids, the nose, the forehead, temples, lips, chin and cheeks. They secreted a putrid and most offensive semi-fluid mass. When she was brought into the hospital she had altogether 107 such tumors, of which there were 15 on the left, and 16 on the right eyelid, entirely closing up the opening of both eyes. In the centre of these tumors there was a small dark point, which was deeper than the circumference, being evidently the opening of a follicle.

When the tumors were compressed by a pair of pincers, or by a thread laid round their base, a fatty white core was pressed out through the points mentioned. On being examined by the microscope, it appeared that they did not consist of fat or sebum, but of epidermis cells, covered by a layer of large cells devoid of nuclei, such as are found in cancroid tumors. Ligatures were passed round the base of the largest of these tumors, after which they became black, dry, and fell off. Putrid pus formed on the surface, and an application of chlorine water was then made. There was some erysipelas of the left side of the face, which, however, soon subsided. In those tumors which had not been operated upon, considerable suppuration now took place, after which they became much smaller and drier, and within a short time disappeared altogether under the influence of good food, cleanliness, baths and cod-liver oil. Two months after admission, there were only very few small white tumors in the neighborhood of the eyes left, and the great disfigurement of the face had disappeared. A month afterwards, however, fresh tumors were formed, and a violent blenorrhœa of the conjunctiva supervened. These fresh tumors were not nearly so large as the previous ones, and gradually disappeared after having reached a certain size. At present the child is almost entirely cured, there being only a few traces left of the affection.

In order to settle the question of the contagiosity of these tumors, Professor Virchow, at a time when the affection was at its acme, inoculated a dog with the contents of these tumors, which were also rubbed into the skin of the animal. These experiments, however, failed. Professor Ebert then inoculated himself with the same, first on the arm, and afterwards on the forearm, but equally without success. An idiot child was afterwards experimented upon, but in this case also there was no result. It was therefore believed that molluscum contagiosum was not a really contagious malady, when it was remarked one day that a child, whose bed was nearest to that of the patient in question, had three of the same tumors on the left eyelid, and in the course of time she got no less than nine of them. The children had been frequently playing together, and it was therefore quite probable that some of the secretion might have got into the follicles of the second child, and there gave rise to the same disease.

Professor Virchow considers the contagiosity of these tumors as established by the case related above. He says that these cases are exceedingly rare, and that the expression "molluscum contagiosum" is by many, and chiefly by English authors, indiscriminately used for all sorts of little tumors, more especially for small encysted atheromata with excessive formation of connective tissue. He has examined several of these tumors, and could at first not satisfy himself as to whether the openings, which could be distinguished at the surface, were pre-existing apertures of follicles, or if they were caused by ulceration, and pressure of the mass from below upwards.

The microscope showed that the several nodes were exceedingly similar to that form of tumor which is generally designated as epithelial cancer or cancroid. The apertures communicated with a number of long canals, which were filled with a mass consisting of an exterior layer of epidermoid cells, and an inner portion which looked like fat. In the same way we notice in cancroid tumor of the lower lip, after ulceration has commenced, deep fissures and holes which lead into canals and tunnels. But there appeared this difference between the two, that the molluscum nodes proceeded directly from the follicles, and there was only production from the surface, but the parenchyma was nowhere affected; while, on the other hand, cancroid tumor is a parenchymatous formation which can only secondarily proceed outwards, after the skin has been broken, and ulcreation commenced. The mass which filled the centre of these molluscum canals, consisted chiefly of round, small, shining corpuscles, which lay closely together and looked like heaps of cells filled with fat. But when they were more carefully examined, it appeared that they did not consist of fat, but of albumen. These corpuscles are formations which also occur in cancroid tumor, and are most probably formed endogenously in cells, after which they become free. They are no doubt the vehicles of contagion; being the only thing which is foreign to the system, and being also found in cancroid tumor, which is notoriously infecting. By reason of their very small size they are peculiarly suited to penetrate into the smallest openings of the skin, and to be smeared, as it were, into the hair-follicles, where these are somewhat open. Professor Virchow has, therefore, endeavored to find out whether phenomena of motion may be observed in them. They have the habitus of cells, which in other places are found to be contractile. But he has never as yet observed anything else but imbibition of liquids, and consequent change of shape in the former, but no spontaneous motion.

It would, therefore, appear that there are three different species of "molluscum." The originally so-called tumor, which belongs to the connective-tissue class, Virchow proposes to call *Fibroma molluscum;* the one that has just been described might be called *Epithelioma molluscum.* Between these two principal forms stands that which is described by English authors as *Molluscum contagiosum,* but which is in reality a perfectly closed node, consisting of epidermis cells surrounded by loose connective tissue. The author who has most offended in this way is Mr. Toynbee, who has described "*Mollusca contagiosa*" of the external and middle ear, which are perfectly closed sacs without an opening, and cannot, on this account, be contagious, as it has been proved a long time since that there must be an open orifice, if tumors are to be transmitted.—*Berlin Correspondence of London Medical Times and Gazette.*

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

April 24th.—*Fœtal Bones expelled from the Rectum.*—Dr. Storer reported the following case:—

"Mrs. W., about 30 years of age, consulted me in September, 1861, respecting her condition, which caused her no little anxiety. She had felt unwell for several months—complaining of pain in the lower portion of the abdomen, which she described as having been at times very severe, and continuing, when present, from three to four hours. At one time she thought she was dying—the urine was suppressed, and the catheter was required to be passed for a fortnight.

"When I saw her, she had just returned from the country—where she had gone to recruit. A slight fulness was felt on the right side of the abdomen. Upon making a vaginal examination, I decided that she was pregnant. Twenty days after my examination, she was attacked during the night with pains similar to labor pains, which continued for twelve hours, and were very severe; they then ceased. Afterwards they occurred occasionally in less degree. During the succeeding five weeks she suffered much from dyspnœa, and became very feeble. Early in November diarrhœa supervened, which continued, exceedingly offensive, for ten days. A discharge was also thrown off from the vagina, of a dark, sanious appearance, and vomiting occurred daily. For several weeks her situation was exceedingly alarming—she had become very much emaciated, could retain but little nourishment, slept only under the influence of anodynes, suffered constantly from difficulty in micturition. During this period of prostration, upon one of the cloths placed beneath her to receive the alvine evacuations, the nurse perceived a particle, which was so peculiar that it was preserved for me to examine; it proved to be a phalangeal bone. From this time the discharges from the bowels almost daily contained some portions of bone. Sometimes days would pass without a portion, and then small particles would be thrown off. I will not weary your patience by minute details. I was several times called in great haste to remove portions which could not be evacuated; thus, my notes say:—

"May 25th.—Removed to-day cranial bones from rectum by finger and forceps.

"June 18th.—Two ribs; last night, a tibia.

"July 20th, 1862.—Bowels becoming more regular. No bones have passed during the last fortnight. No pain. Has been to the North End without trouble.

"From this period she gradually improved, and during the autumn she commenced the charge of a large boarding-house, which she has since kept."

The following enumeration of the bones which are wanting to complete the skeleton was made by Dr. Hodges:—

Cranial bones wanting.—One malar bone; one temporal bone (petrous portion); ethmoid bone.

Facial bones wanting.—Two palatal bones; two turbinated bones; two nasal bones; all the *teeth* wanting; no *os hyoides*.

Of the *spinal column* twelve vertebræ are wanting, and the entire os sacrum and coccyx. Of the remaining vertebræ four only are complete; four want the body, and four want the body and one half of the arch.

Three *ribs* of the right side and seven ribs of the left are wanting. *Sternum* wanting.

The *os pubis* of the left side is wanting.

The *right arm* wants all the bones of the hand except two phalanges. With this exception it is complete.

The *left arm* wants the *radius* and all the bones of the hand except one phalanx. Otherwise complete.

The *right leg* wants all the bones of the foot, except four metatarsal bones and one phalanx (1st) of great toe. Otherwise complete.

The *left leg* wants the *tibia* and whole of foot.

No *patellæ*.

Extra-uterine Fœtation; the Sac communicating freely with the large Intestine.—Dr. Jackson exhibited the fœtus spoken of by Dr. Storer at the meeting of January 9th, and which Dr. S. had received from Mr. Robert L. Dryer, of Utica, N. Y., a member of the present medical class.

The patient was a woman, 40 years of age, of robust appearance, and the mother of six healthy children. For some months before death, which occurred last May, she had been failing, and on one occasion complained of pain in the bowels; but the discovery that was made on examination was entirely unexpected, and Mr. D. regrets exceedingly that no facts in relation to it have as yet been ascertained. Dr. J. M. Cleaveland, Mr. D.'s preceptor, has written to the family, who reside in a distant part of the State of New York, and to the family physician and clergyman of the parish, but he has received no answer to his letters.

On examination, which was a hurried one, a tumor was discovered upon the left side of the abdomen, but it was slight, the body being very fat. The liver was very much enlarged, and of a dull pale color. The iliac arteries were greatly distended with coagulated blood, which last had, upon the left side, a remarkably dried appearance.

The sac was in the lower umbilical and upper hypogastric regions, and was in part strongly adherent to the abdominal parietes. The fœtus lay free in its cavity, and very compactly doubled up; the soft parts being extensively changed into adipocire, and in amount not more than about enough to hold the bones together. Judging from the size of these last, and from the fact that it weighed, in the recent state, four pounds, the fœtus must have about arrived at the full term. The sac also contained a few of the long bones of the extremities, and a quantity of fæcal matter, which was mostly, though perhaps not entirely, liquid. The whole mass was then removed, and at a subsequent examination the communication of the large intestine with the sac was seen; the two orifices being three inches or more apart, and the transition between the two cavities gradual. On cutting open the intestine, one portion contained one or two small bones. The parietes of the sac are compact in structure, vary in thickness, and show no appearance of placenta. Both ovaries and Fallopian tubes are very distinctly made out, and appear normal; a portion of one of the tubes, however, being cut away towards its uterine extremity. A

thin, rough piece of bone, about half as large again as the thumb, and adherent to the inner surface of the sac, should have been mentioned.

The specimen will be preserved in the museum of the Medical College.

May 8th.—*Vomiting of a Mass of Woolen from the Stomach of a Child.*—Dr. E. Palmer showed the specimen.

The mass was very hard, almost incompressible, egg-shaped, three inches in length and an inch and a quarter in its longest transverse diameter, and was thrown up under the following circumstances.

F. L. is a boy, three years old, and has all his milk teeth, but is of hardly average vigor and health. A month ago he was seized with diarrhœa, which was soon accompanied with vomiting—neither very troublesome. All appetite departed, and loss of flesh quite rapidly occurred. In about ten days this mass of woollen was vomited, after which recovery rapidly took place.

For the six months previous to the diarrhœa, there had existed a morbid appetite for everything made of wool. The little fellow would pick up from the floor bits of yarn and swallow them; gnaw his blankets, so that it became necessary to encase them in cotton; rush at woollen garments, ladies' plush overcoats especially, like a little fury. Of course great pains were taken to overcome this propensity, and, for some little time before the occurrence of the diarrhœa, it was supposed with success. Whether the morbid appetite still exists it is difficult to determine, for the fear of vomiting up another "*mouse*" prevents indulgence. The form of the mass which these woolen fragments assumed in the stomach, and its hardness, are interesting phenomena.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JUNE 1, 1865.

Medical Journals.—The remark quoted by a correspondent, in a recent number of this Journal, from a professional acquaintance who somewhat conceitedly pronounced medical journals to be humbugs, one week announcing one specific to discredit it the next, and that therefore he would have nothing to do with them—unjust as it is to most medical periodicals—would yet seem to express a feeling which to a considerable extent holds possession of the minds of the profession at large. At least this appears to be a fair inference from the fact that, as a general rule, in this country at least, medical journalism is about as unsatisfactory and unremunerative an occupation as a man can well engage in. Let us look at this state of things for a moment and see whether it is one which admits of a remedy, and whether it is one in which the medical profession at large is doing its whole duty.

It may be urged that the principal reason why medical journals on this continent meet with such poor support is that there are too many of them. The communications which might give a creditable character to a few, are distributed among so many that their value is lost by dilution with common-place matter which no one wishes to read. This

is only a partial truth. In the parallel instance of the daily press, we see the whole country flooded to an unprecedented extent with an infinite variety of newspapers, yet every great city furnishes several which are most liberally sustained by the public and most ably conducted. It would not be fair to say that the same amount of enterprise and ability would secure a corresponding success in medical journalism, for it is a notorious fact that several of our weekly and monthly publications which have died from inanition have been conducted with signal ability. What, then, is the cause of the failure in these instances? For our answer we must look, we think, to the medical profession itself.

The man who only wants a medical journal for a weekly supply of new remedies has but a poor conception of what such a publication should be, or of his own duties of self-culture. It might as well be admitted at once, that it is impossible to offer to the world every week whole pages of novelties of this kind. The effort to do it would be sure to end in disappointment. But this is after all but a small part of the function of medical journals. Our profession is intended to be a liberal one, including in its preparatory training a large circle of the physical and intellectual sciences. Shall this culture end with the examination which licenses a graduate to practise? Is a liberally educated physician to sink at once into a mere scribbler of prescriptions, the more numerous and various the better?

The unlimited range of discussion on topics of theory and practice, and of the causes of disease; the startling revelations of the microscope and of chemistry applied to medicine, every day throwing so much new light on the processes of health and its derangements, which have hitherto been involved in the mists of speculation merely; the exact observations and experiments in physiology which characterize the present day; the crucial examination of old opinions and prejudices; the faithful study of the laws of nature; the honest application of these laws in the simplification of the treatment of the sick; the interesting movements and discoveries in the collateral physical sciences which each day brings to light—all these and many other topics find their proper place in the pages of the medical periodical. And then it is necessary that the old truth should be constantly *re*-presented to the world. New methods of stating it, or new and attractive forms of illustrating it, set it before the mind with a freshness which is necessary to keep it alive. Every reader must appreciate this, and no man deserves a respected place in our profession who is not a reader.

Medical journals also furnish a bond of union and sympathy between the members of our profession which nothing else can supply. True it is that our brethren are too apt to hold a passive position in this relation, willing to be recipients rather than communicators of the wisdom that comes by experience, leaving to a comparative few the utterance which ought to be varied and general. In this matter there is great room for, and need of improvement. Some of our most able men are only known as such to their patients and immediate friends; they never write for a medical journal. The reticence of the "silent profession" should have no check upon the pen which might be so often profitably employed where it now lies idle.

One word about the pecuniary support of medical journals. We

are told that in Europe, especially on the Continent, every educated physician makes it a matter of conscience to subscribe for at least one of these publications. Without it he feels that he would be cut adrift from the main body of the profession, and he takes a constant interest and pride in comparing his own experience with that there recorded, and is always ready to do his part in contributing to the common stock. Would that we could say as much of the members of the medical profession on this side of the water! We do not even, if we are rightly informed, keep pace in this matter with the legal profession. The law journals, we are told, are well sustained here by members of the bar; and surely there is quite as much reason for a similar patronage by physicians of the publications of their profession.

We have thus touched briefly and most superficially on some of the topics which suggest themselves to our minds when we turn our thoughts to the labors with which as journalists we are engaged. Most thankless and unsatisfactory they too often are; let us hope that our brother physicians will give us more of that sympathy and coöperation which can do so much to lighten the task for which the pecuniary compensation is so insignificant.

Boston Society of Natural History. Walker Prizes.—One of the first fruits of the munificence of the late Dr. William J. Walker appears in the following announcement, which we publish with great satisfaction. Heretofore the students of natural science in this country have had hardly any of the inducements which such prizes offer to stimulate and reward them for their special investigations. The Walker prizes will undoubtedly be the means of bringing before the scientific world many valuable researches which otherwise would not have been likely to see the light or to be undertaken.

"The following prizes were founded by the late Dr. William J. Walker, for the best memoirs, and in the English language, on subjects proposed by a committee appointed by the Council of said Society. The first and second are to be awarded annually; the third, once in five years, beginning in 1870.

"*First*—For the best memoir presented, a prize of sixty dollars may be awarded. If, however, the memoir be one of marked merit, the amount awarded may be increased to one hundred dollars, at the discretion of the committee.

"*Second*—For the next best memoir, a prize not exceeding fifty dollars may be awarded at the discretion of the committee; but neither of the above prizes shall be awarded unless the memoirs presented shall be deemed of adequate merit.

"*Third*—Grand Honorary Prize. The Council of the Society may award the sum of five hundred dollars for such scientific investigation or discovery in natural history as they may think deserving thereof; provided such investigation or discovery shall have first been made known and published in the United States of America; and shall have been at the time of said award made known and published at least one year. If in consequence of the extraordinary merit of any such investigation or discovery, the Council of the Society should see fit, they may award therefor the sum of one thousand dollars.

"*Subject of the Annual Prize for* 1865–6. 'Adduce and discuss the

evidences of the co-existence of man and extinct animals, with the view of determining the limits of his antiquity.'

"*Subject for* 1866–7. 'The fertilization of plants by the agency of insects, in reference both to cases where this agency is absolutely necessary, and where it is only accessory;' the investigations to be in preference directed to indigenous plants.

"Memoirs offered in competition for the above prizes must be forwarded on or before April 1st, prepaid and addressed

'*Boston Society of Natural History,*
for the Committee on the Walker Prizes,
Boston, Mass.'

"Each memoir must be accompanied by a sealed envelope enclosing the author's name, and superscribed by a motto corresponding to one borne by the manuscript.

"*Boston, May,* 1865."

The Plymouth District Medical Society held its annual meeting at Kingston, on Wednesday, May 10th, and made choice of officers for the ensuing year as follows:—*President,* P. L. Nichols, M.D. *Vice President,* Winslow Warren, M.D. *Secretary and Treasurer,* H. N. Jones, M.D. *Librarian,* Francis Collamore, M.D. *Censors,* Drs. Josiah S. Hammond, Benjamin Hubbard, James F. Richards. *Counsellors,* Drs. Asa Millet, N. B. Tanner, Josiah S. Hammond, James Wilde. *Commissioner on Trials,* Dr. Timothy Gordon. *Delegates to the American Medical Association,* Drs. Asa Millet, H. N. Jones. *Essayist,* Dr. James F. Richards.

Drs. Wilde, Collamore and Jones were appointed a committee to draft resolutions on the death of Dr. John Porter, of Duxbury, and submitted the following:—

Whereas it has pleased Divine Providence to remove from among us our friend and associate, Dr. John Porter, it is

Resolved, That by the death of Dr. Porter this Society and the profession have lost one of their ablest and most efficient members—one whose skill and kindness have been tried for a long series of years, and have not been found wanting.

Resolved, That we recognize in the character of Dr. Porter that close observation, sound judgment, and untiring energy, which for so many years gave him the confidence of a large circle of friends and patients.

Resolved, That we tender to the family of the deceased our sympathy with them in the bereavement they have sustained. We trust that the memory of the many virtues of the deceased, and his peaceful departure from a life of toil and care, may soften the pain of that separation which is but the first step to an eternal union.

Resolved, That a copy of these resolutions be communicated to the family of the deceased, and that they be published in the Boston Medical and Surgical Journal. H. N. Jones, *Secretary.*

Smallpox and Vaccination. *Messrs. Editors,*—At the present time, when smallpox is prevailing to a considerable extent in some of our inland towns, perhaps the following report made by myself about a

year since to the Medical Director of the Corps to which I was at that time attached, may prove interesting to your readers.

Yours truly, ISAAC SMITH, JR., M.D.

East Stoughton, Mass., May 29th, 1865.

HEADQUARTERS, 26TH MASS. VET. VOLS.
NEW ORLEANS, LA., MARCH 10, 1864.

Herewith I have the honor to transmit a report of vaccinations performed at Franklin, La., by myself, which you solicited. The subjects were for the most part negroes, a portion citizens, and the residue soldiers.

The whole number of persons vaccinated was six hundred and fourteen (614). About one third of this number had never been vaccinated before; a second third had, according to their own statements, been previously vaccinated, and the remaining third bore upon their persons conclusive evidence, in addition to their own testimony, of two previous, good vesicles.

Of those with whom this was the first operation, nearly every case resulted in a well-developed vaccine vesicle. The same result was obtained in a large proportion of the second class.

Of the third class about thirty (30) cases presented a good vaccine vesicle. From what experience I have had in this specialty, I am led to believe that no one should rely, subsequent to puberty, upon a vaccination made before that period. Though I am well aware there are many people who live the allotted time of man, oftentimes exposed to this disease, and yet not contracting it, still this is not conclusive evidence that the vaccination alone furnished the protection, as some constitutions seem to resist the attacks of almost every disease.

I have the honor to be your ob't serv't, ISAAC SMITH, JR.,

To Medical Director, 19th A. C. *Assist. Surg. 26th Mass. Vet. Vols.*

[It is to be regretted that the statements with regard to the first two classes above referred to are given in such general terms. Their value would have been immeasurably greater if given in exact numbers.—EDS.]

PHILANTHROPY DURING THE WAR.—We learn from the *Evening Post* that a gentleman of this city, Mr. Hartley, has compiled a small book, prepared with great labor, and which is a most striking exhibition of the philanthropic exertions of the American people during the war. It is stated therein that the total contributions from the States, counties, and towns, for the aid and relief of soldiers and their families, have amounted to over one hundred and eighty-seven millions of dollars ($187,209,608 62); that the contributions for the care and comfort of soldiers, by associations and individuals, have amounted to over twenty-four millions ($24,044,865 96); that the contributions, at the same time, for sufferers abroad have been $380,140 74; and that the contributions for freed men, sufferers by the riot of July, and the white refugees, have been $639,644 13; making a grand total, exclusive of the expenditures of the government, of more than two hundred millions of dollars ($212,274,259 49).

It is no exaggeration to say that this is unparalleled in the history of nations; indeed, our limited reading of military annals does not allow us to recall any instance in which the same thing has been so

much as attempted. In England, during the Crimean war, and in Germany, during the struggle against Napoleon, both men and women did a great deal in contributing to the comfort and relief of their armies. It is, in fact, impossible that war should rage in any nation without exciting the sympathies of the people to a greater or less extent. But nowhere, we believe, have such spontaneous and systematic exertions been made, or such grand results accomplished, as in the United States.

But the real significance of these large contributions lies in the deep and almost universal devotion which they manifest on the part of the people in the cause of the war. All classes have taken part in them—the poor widow with her mite, the rich merchant with his thousands, the child of the Sunday school, the settler of the backwoods, the American roaming in distant lands.—*Christian Inquirer*, from *Washington Intelligencer*.

Death from Air in the Uterine Veins.—Dr. Olshausen relates a fatal case of entry of air into the uterine veins. A secundipara of robust frame, aged twenty-nine, was at term. The uterus was unusally distended; no albumen in urine. Labor lingering; uterine douche used. The water was of 30° Réaumur; it was forced into the vagina by a pump, gently. A third injection was made by a midwife. After eight minutes' use the patient began to complain of oppression. The tube was withdrawn. The patient rose in bed, immediately fell back senseless, and died in a minute at most, under convulsive respiratory movements and distortions of the face. Eight minutes later bleeding by the median vein was tried, but only a few drops flowed. On touching the body, distinct and widely-spread crepitation was felt.

Autopsy, eight hours after death.—A large quantity of dark fluid blood escaped from the sinuses of the dura mater. The cerebral membranes very hyperæmic; brain normal; lungs somewhat congested; heart lying transversely, apex in fourth intercostal space. Left ventricle in firm contraction; right quite soft, something like an intestine with thick walls; the coronary vessels contained a quantity of air-bubbles. Left heart had scarcely any blood; the right held little, but it was frothy. *Abdomen:* The distended uterus crepitated everywhere on pressure under the hand. A number of vessels of medium calibre immediately under the peritoneum were plainly filled with air. The right broad ligament was strongly distended with air-bubbles; and this emphysema of cellular tissue extended from the broad ligament through the retro-peritoneal space to the inner side of the right kidney, and even below the liver to the vena cava ascendens. *The vena cava ascendens was enormously distended*—it was at least an inch in diameter. The distension was mainly owing to air. The uterus was divided in the median line. A placenta was attached to the anterior wall; a small flap to the right was detached from the uterus. Another placenta was attached behind and to the right. A larger portion of this had been separated, so that there was a sort of pouch between it and the uterine wall. The two ova were uninjured. Death was caused by forcing air into the vessels of the placental-site. It was concluded that the tube had been passed into the uterine cavity, and that air had been sucked up with the water by the pump.

[This case presents another example of the danger of resorting to

the vaginal douche for the purpose of inducing labor, a danger from which the more certain and expeditious method of hydrostatic dilatation of the cervix uteri, is free.]—*Brit. and Foreign Medico-Chir. Review.*

Connecticut State Medical Society.—The annual convention of the Connecticut State Medical Society met at the hospital in Hartford, May 24th. The following officers were elected for the ensuing year:—*President*, Dr. N. B. Ives, of New Haven; *Vice President*, Dr. Isaac G. Porter, of New London; *Treasurer*, Dr. J. C. Jackson, of Hartford; *Secretary*, Dr. M. C. White, of New Haven. Twenty-four fellows from the State Society were present; also two delegates from New Hampshire, and two from New York. Dr. Hunt, from the committee of award, announced that the prize of $50 for the best essay on the means of preventing consumption, has been given to Dr. G. W. Burke, of Middletown. Dr. N. B. Ives, of New Haven, presented to the Society $50 as a prize for the best essay the coming year. At the afternoon session, Dr. Bronson, of New Haven, read an interesting biographical sketch of the late Dr. Charles Hooker, Professor of Anatomy at Yale College. In the evening, Dr. E. K. Hunt, of Hartford, retiring President of the Society, read a highly instructive address at Representatives' Hall. After the delivery of the address, the members, at the invitation of the Hartford Society, repaired to the Trumbull House, where a sumptuous collation was prepared for them.—*Hartford Courant.*

Since the United States Army General Hospital at Readville was established—July 6th, 1864—there have been admitted 3086 patients; 1330 have been returned to duty, 831 have been transferred to other general hospitals, 166 have been discharged for disability, 40 transferred to the Veteran Reserve Corps, and 74 discharged, in accordance with recent orders of the War Department, as requiring no further treatment. Twenty-eight have died at the hospital.

The total fund of the Hartford (Ct.) Hospital is $56,000. The total receipts for the year ending Feb. 28th, last, were $9,193·85; disbursements, $9,136·71. Through the liberality of C. F. Pond, $2,000 were received for the purpose of establishing free beds in the hospital. During the past year there have been 163 under care, 142 discharged, 102 recovered, 2 discharged improved, 9 discharged stationary, 29 died. The town of Hartford paid for the support of patients, $505·79, at the rate of $1·00 per week. The average weekly amount received from the State for each patient was $1·48. The average cost for the support of each patient, including board, washing, nursing and medical attendance, was $6·37 per week.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, May 27th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	36	28	64
Ave. mortality of corresponding weeks for ten years, 1853—1863,	39.6	33.5	73.1
Average corrected to increased population - - - - -	00	00	80.82
Death of persons above 90 - - - - - - - - -	0	0	0

Deaths in Boston for the week ending Saturday noon, May 27th, 64. Males, 36—Females, 28. Abscess, 1—accident, 2—anæmia, 1—inflammation of the bowels, 2—congestion of the brain, 1—disease of the brain, 5—inflammation of the brain, 1—bronchitis, 1—cancer, 1—carbuncle, 1—consumption, 8—convulsions, 2—croup, 1—dropsy, 2—dropsy of the brain, 3—erysipelas, 1—scarlet fever, 1—typhoid fever, 5—hæmorrhage, 1—disease of the heart, 1—homicide, 1—infantile disease, 1—congestion of the lungs, 3—inflammation of the lungs, 3—rheumatism, 1—scrofula, 1—smallpox, 5—suicide, 2—unknown, 5—uræmia, 1.

Under 5 years of age, 22—between 5 and 20 years, 13—between 20 and 40 years, 17—between 40 and 60 years, 7—above 60 years, 5. Born in the United States, 43—Ireland, 16—other places, 5.

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CASES OF CEREBRO-SPINAL MENINGITIS OBSERVED AT PALMER, MASS.

BY DR. HOLBROOK, OF PALMER.

[Reported to the Boston Society for Medical Improvement, by Dr. HENRY I. BOWDITCH, and communicated for the Boston Medical and Surgical Journal.]

HAVING been called, professionally, to Monson, April 1, 1865, I met Dr. Holbrook, and learning that a very severe epidemic of the above disease had swept through Palmer, I asked him to give me an abstract of the cases he was cognizant of, and most of which he had seen and attended. He was kind enough to relate them to me as follows, and I present them, in his name, to the Society.

CASE I.—A boy, æt. 8, was taken while at school, in the afternoon of Feb. 9, 1865. He was sent home by the teacher. He became very weak in the legs, and finally had to crawl upon his hands and knees before he could reach it. He was half an hour in thus crawling about fifty rods. When seen by Dr. H., his feet were of icy coldness; he complained of pain in the right side and spine. Pulse 124. In about two hours spasms commenced in various muscles, and involuntary dejections took place. The pulse became more rapid; the skin moist. At 3, A.M., of 10th, he was unconscious, and death took place at 7, A.M., that is, in about twelve or fourteen hours from the commencement of the attack. There was no eruption during any period.

CASE II.—Boy, æt. 16. Scholar. He was not very well on the 7th. He was weak in the legs and felt tired. He attended to some work about the village, though not quite well. On the 9th, was up and about the house, feeling cold. On the 10th, he got up, but felt miserably, and lay on the sofa most of the time. At 11, A.M., pain in the head and spine commenced. Dr. H. was then first called. The patient's countenance became quite anxious, and he was very depressed in feeling. Dry cupping was tried along the spine. Intense distress was caused, with spasms, when the cups were applied to the cervical vertebræ. Liniment. ammoniæ and the galvanic battery were also tried. Brandy, quinine, &c., were used, but all with-

out avail. The battery caused great distress. Involuntary dejections occurred, and the patient died at 7, P.M., that is, eight hours after the first visit, and three days from first feeling unwell. No eruption took place.

Case III.—A young man, under the care of another physician. Dr. H. reported from hearsay. He had been ill several days. He was chilly, had headache, with mental disturbance, pain in the spine, vomiting, and great restlessness of lower extremities. Died at 8, P.M., Feb. 10th. The skin was seen to be spotted after death.

Case IV.—An Irish child, 7 years old. Taken ill on the evening of February 11th, having spent the afternoon in "coasting." He first complained of pain in the legs. At 8, A.M., of the 12th, went down stairs for dejection, and was sent back again. He fell upon the stairway while going up. He died at 12, M., that is, in about twelve or fourteen hours. The attack was accompanied by vomiting, pain in the head, injection of the eyes. Injection of the eyes was, in fact, noticed in all the cases.

One case occurred after this, under the care of another physician, which Dr. H. did not see, and could not give any details in relation to it.

Case V.—A boy, æt. 9 years, 9 months. Was bright up to the time of being taken. He was attacked during the night of the 21st. He said he wanted to urinate, and asked his father to take him up, as he was afraid to rise for fear of falling. He soon after fell asleep, but began to talk. Convulsions occurred in the morning, and Dr. H. was summoned at 9, A.M. Found him very nervous, with a very rapid pulse; his head was forcibly drawn backward, and there were vomiting and violent headache. Very strong mustard-water and hot-water applications had been made to the skin, which presented a sort of parboiled aspect in consequence thereof. At 2, P.M., he had a terrible fit, and subsequently frequent convulsions occurred, and he died in great distress at 7, P.M., on February 23d, that is, in about thirty-six hours from the first illness. The whole body became of a mahogany color.

Case VI.—Boy, æt. $6\frac{3}{4}$ years. Taken March 3d. Ate a full breakfast, and went to perform some farm duty. Suddenly he exclaimed, "How my neck aches," and put his hand to it. He then went to sleep on a couch. His pupils were at first contracted, but subsequently dilated. Dr. H. saw him at $1\frac{1}{2}$, P.M. Pulse 115; face flushed; drowsy. On being called, he answered well, but immediately fell asleep again; made no complaint. At 5, more drowsy; pulse 125; skin hot and dry; nausea. An emetic was given at 6. At 7, P.M., pulse 130; all the symptoms worse; veratrum viride was given. Pulse rather lower at 9, but the patient still drowsy. Head at times was drawn back, with occasional apparently intermittent paralysis. 12.—Could scarcely be aroused; but yet after an injection he rose, and had an operation from the bowels, talked

freely, seemed rational, and said he had no pain. The Dr. thought him better. Some sweating. Towards morning had dysphagia, and became restless. The spine was blistered. Died, eighty hours from the commencement of the attack, in violent spasms, with tenderness of the upper part of the spine. This tenderness was found in all the cases in which the vertebræ were pressed.

Case VII.—Girl, 6 years of age. Fit at midnight of March 1st. Pulse 140; pupils dilated; blind. Died at 5, P.M.

The above are all the fatal cases.

Cases now under treatment.

Case I. (8th of all the cases).—A boy, 1 year old. Taken Feb. 21, with a fit in the night. Convulsion and drawing back of the head came on the following day; vomiting and drowsiness; pulse 130 to 150 all the time; frequent rolling of the head; pupils dilated; strabismus; wants to nurse, and vomits; paralysis of arms occasionally.

Case II. (9th of all the cases.)—A girl 10 years old, sister of Case IV. (fatal) above. She had vomiting and dysphagia. (Most of the cases had dysphagia, often requiring beef-tea injections in order to support life.)

Case III. (10th of all.)—Man, æt. 21, colored. Taken at 3, P.M., Feb. 27th. Was suddenly seized with pain in head and spine; loss of mind and stupor; dysphagia; no drawing back of the head. Recovered in three or four days, after a violent emetic.

Case IV. (11th of all.)—A lady, 42 years old. Was walking and heard of a story of horrible character, and fell suddenly; pain in head and spine; sensitiveness; no loss of consciousness; pupils dilated.

These cases were spread over an area of four or five square miles—chiefly in Palmer. They occurred in the best and the worst houses. Some of the patients were tenderly cared for, and others were of the neglected class. They were equally affected. All treatment was tried of a *regular* kind, and in some instances the homœopathic, Thomsonian, &c., were used. No good result seemed to arise from any of them.

A year ago the epidemic occurred in Hardwick, under Dr. Orcutt. The cases were equally severe, and of the same character. In Greenfield, also, it has appeared. In Brattleboro', it prevailed last year. Recently it occurred in Greenwich (see letter appended), also in Amherst (see remarks of Dr. Smith, of Amherst, also appended).

Dr. Holbrook assures me that when, in February, the sudden and severe cases were showing themselves, the village was almost deserted, and it was even difficult to procure help. All seemed to imagine it to be contagious, or at any rate to be avoided as dangerous. He informs me, moreover, that other diseases at this time had a similar nervous, irritable type.

There seems no good reason for believing it to be contagious.

All the symptoms point distinctly to the peculiar nature of the affection, viz., that it is an affection probably acute and inflammatory, of the spinal, and, at times, of the cerebral mass. The peculiar sensitiveness of the upper part of the spinal column, which, Dr. Holbrook says, was always found when looked for, the drawing back of the neck, the violent convulsions—all point to the spinal column. In fact, this irritation of the nervous system seems to have been much more constant than the discoloration of the skin. The term "spotted fever," given to this affection, seems a misnomer in this series of cases.

I append the following letter from Dr. Goodell, of Greenwich, to Dr. Holbrook, and which Dr. H. allows me to publish, and also give the substance of a conversation held by myself with Dr. Smith, of Amherst, who has had experience of the fatal effects of this epidemic. A thorough investigation of the whole subject, a gathering in of all the facts, and a history of its rise and progress in New England, would be a valuable labor.

GREENWICH, FEB. 2, 1865.

Dr. Holbrook, of Palmer.

DEAR SIR,—Having just passed through an epidemic of meningitis, and hearing that you are afflicted with the same scourge, I would like to learn the *truth* of the matter, and I address you, as we can tell very little by flying stories in such times of excitement. I wish to know how many cases of *real meningitis* there have been in Palmer, *what* the treatment, and *what* the result. We have had seven cases of real cerebro-spinal meningitis, which have proved fatal in from twelve hours to three days. Treatment was of little or no effect. *Symptoms.*—Chills; violent pain in the head and back; eyes fully injected and protruding; vomiting, and sometimes purging, with loss of mind soon after the attack; later, stagnation of blood; spasms; powerful contraction of the cervical muscles, and great difficulty of deglutition; death, as though from poison.

Treatment.—Large doses of quinine and whiskey, with opium; covering the patient with hot fomentations, and mustard blisters to back of neck and spine, with every other powerful counter-irritant short of the *actual* cautery; half a pint of French brandy every two hours; injection of a teacup of whiskey and one tablespoonful of laudanum; inhalation of two fluid ounces of chloroform and ether—all with no effect. I have since had several cases, with all the symptoms, which have readily yielded to treatment, but left the patient very weak. I do not look upon them as the *real* disease.

We have had some twenty cases of pneumonia since Jan. 1st, and most of them strongly typhoid; in fact, such a lot of black tongues I have never seen in real typhoid fever.

Meningitis I do not consider contagious. What is your opinion? And after all I can find written upon the subject, or can get from old doctors, my greatest desire is still "*more light*," "*give me more light.*"

* * * * * * J. W. GOODELL, M.D.

Dr. Smith, of Amherst, says that there is an alliance between this and diphtheria. Dr. S. mentioned the following as the chief symptoms:—spasms of the face, even when the patient seemed nearly well in body and mind, very severe, followed in some cases by opisthotonos; more tenderness about the neck than elsewhere. Has seen cases of purpura (spotted fever) with it. Urine frequently phosphatic; no albumen. Pulse often regular to the last. Œdema of the lungs early, with crepitus on auscultation. Very sluggish in all mental or physical movements. Always some influence seems to remain, with debility, or rather breathlessness. Spine rubbed with hot water, and copious draughts (one pint) of whiskey, are two of the methods of treatment. Protiodide of mercury seems at times useful. These nervous symptoms attack in other complaints, and at times the patients are almost insane at night.

DEATH FOLLOWING CATAMENIAL SUPPRESSION.

[Reported to the Boston Society for Medical Improvement, and communicated for the Boston Medical and Surgical Journal.]

By J. N. Borland, M.D.

The patient was a single woman, 30 years old. She entered the Boston City Hospital on the 13th day of March last. The day previous to her entrance was one of the most severe of the winter, with a high, blustering and excessively cold wind. The patient reported herself as having always been a healthy, hard-working woman, suffering only from somewhat irregular catamenia. For a year before entrance she had worked unusually hard, and was somewhat enfeebled in consequence. The day before entering she went out of the house, intending to go to church, and feeling as well as usual. While in the street she was chilled, became faint, and the catamenia, which had been present normally for forty-eight hours, disappeared. She returned home, went to bed immediately, and throughout the remainder of the day and night experienced much pain in her back and limbs, with chills, nausea, slight headache, a feeling of distension and great weight in the hypogastrium, together with sharp pain in that portion of the abdomen upon motion.

At the time of her entrance, twenty-four hours after the exposure, her face was flushed, but she had no headache; there was a very white coat on the tongue; anorexia and some thirst. She had had much nausea and vomiting during the past twelve hours. No dejection for two days. Pulse 120. Respiration 36, with moaning expiration. Hot and dry skin. Could lie on either side or back without discomfort. On motion there was much pain, confined to the hypogastrium, where there is great tenderness on pressure. No head or thoracic symptoms. Urine scanty and high colored. Hot fomentations to abdomen. Pulv. ipecac. et opii, gr. x., and simple enema containing tinct. opii, gtt. xxv.

On the 14th, I found her bowels had been relieved by the enema. She had passed a sleepless night, and her pulse had risen to 136. She had great tenderness in the hypogastric and right iliac regions, so that she was compelled to lie most of the time on her side, with her legs flexed on her abdomen. In other respects her symptoms and condition were as before. To have turpentine stupes to abdomen, and continuation of Dover's powder every four hours.

March 15th.—Complained less of pain, and had had some sleep. Tongue heavily coated. Pulse 140. Respiration 20, with moaning expiration. There was tenderness on pressure over the whole abdomen, but most strongly marked over hypogastric region, with marked tympanites. Suffered much from thirst. No appetite. ℞. Ol. terebinthinæ, gtt. lxxx.; acac. mucilag., f ʒ iv. M. Half a fluidounce every four hours, and continue Dover's powder.

March 16th.—Slept well through the night; complained less of pain. She was lying on her back, with her limbs fully extended; her abdomen was tympanitic and less tender on pressure. Pulse 140, weak. Respiration 24, sighing. Tongue covered with a thick, yellow, pasty coat. No appetite. Great thirst. No dejection. Urine scanty and high colored. Constant tendency to doze. Skin cool, moist; hands covered with small petechial patches. Continue medicines, and apply four leeches to hypogastrium.

March 17th.—Had slept somewhat. Less pain in abdomen; tympanites well marked. Pulse 140, weak. Respiration 32, with occasional moan. Skin hot and moist. No dejection. Enema of beef-tea, Oss.

March 18th.—Patient was sinking. No pain over abdomen, which is tympanitic. Skin cool and moist. Superficial circulation languid. Pulse 128, feeble. Some nausea, and vomiting of thin, frothy fluid. Tongue at centre and base shows patches of heavy yellow coat; clean at edges, with indentations from pressure of teeth. Stimulants as needed, liberally. She failed throughout the day, and died at 6 o'clock, P.M.

AN ACCOUNT OF SOME OF THE SYMPTOMS AND LESIONS IN THE CASE OF DR. WILLIAM E. COALE, OF BOSTON.

[Read before the Boston Society for Medical Improvement, and communicated for the Boston Medical and Surgical Journal.]

By George C. Shattuck, M.D.

Dr. Coale was exposed to malaria and had fever early in his professional life. He had a large frame, and the osseous, muscular and fatty tissues were well developed. Yet he had occasional digestive derangements; his nervous system was sensitive, and he was easily prostrated. He has had attacks of bilious colic for six or seven years, which were attributed to the passage of gall-stones. In

the summer and autumn of the year 1862, he was much exposed to malaria as a contract surgeon in the employ of the United States government, and as an inspector of general hospitals in the employ of the Sanitary Commission. He had intermittent fever and difficulties of assimilation, apparently from disease of the liver, and frequent sudden attacks of colic and of diarrhœa. The intermittent paroxysms were irregular, very obstinate, and would be brought on by any exposure to cold, and he took a great deal of quinine. He complained often of being very tired, would keep his room for a day or two at a time, and went into the country several times for a week or two, and always with temporary benefit. He was very sensitive to changes of temperature, and having diminished his clothing on Sunday, April 16th, and at the same time exerted himself a good deal in lifting, and had appeals to his sensibilities so as to excite them, he complained at night of being very tired, and, after going to bed, of pain in the right hypochondriac region and of uneasiness. He thought himself on the verge of a serious illness, and gave directions accordingly. Under opiates the pain passed away, and the next day he expressed surprise and said, "how mistaken I was!" He had one or two different attacks of pain in the course of the week, and complained of being tired. A sensation of weariness and faintness coming on suddenly had been prominent symptoms during the past year or two, and he had told his friends that he might die suddenly. On Saturday, April 22d, he was out as usual, but came home soon after twelve o'clock, and went up to his room to lie down, on account of sharp and severe abdominal pain, and put himself under the influence of ether and opium. He had some nausea; vomited the breakfast taken on Saturday; had no relish for food, and took none during the last forty-eight hours of his life, and under the influence of the same anodynes he did not suffer much during the day of Sunday. He woke from a quiet and profound sleep early Monday morning, and, getting out of bed, he fell, from weakness and exhaustion, and was alarmed; and then his attendant, who had seen him suffering as much on several previous occasions, was frightened, and his medical friends were sent for. He was found pulseless, and with cold extremities, at half past seven o'clock, Monday morning. Sharp and exquisite pain came on at intervals. He asked for champagne, which at the close of a previous attack, when suffering from severe hiccough, had afforded him relief, but of which he could only take a little now. Brandy and beef-tea were tried, and two opium pills of a grain each. He still had nausea, was restless and breathed with difficulty. His mind was clear; he sent for those he wished to see, but his pain and restlessness were so great that he could not converse continuously. He failed rapidly, and died at a little before ten o'clock.

He and his medical friends believed his liver to be much diseased, and those intimate with him expressed the fear, within a few weeks

of his death, that he would not survive long. Those who met him casually, and in the intervals of his attacks, regarded him as in vigorous health.

The autopsy was made thirty hours after death, by Dr. Jackson. Peritonitis, rupture of a duct, of a bloodvessel, of the intestine, were amongst the anticipated lesions. The liver was found much enlarged, abnormal in color and consistence, fatty under the microscope. One gall-stone, of the size of a small marble, in the gall-bladder; bile of abnormal color and consistence; thickening of the coats of the bladder and of the gall-ducts, with distension; the intestines much contracted, the coats normal, the contents thin and of a slate color, very abnormal in appearance; a pint of serum in the peritoneal cavity; fibrine floating in it; fatty degeneration of the liver; the tubuli of the kidneys crowded with fat globules and granules; fatty degeneration of the heart, not far advanced.

The condition of the liver, kidneys and heart was in conformity with symptoms during life; but why did he die so suddenly? To what shall we attribute the pint of serum found in the abdominal cavity?—to commencing peritonitis? Did he die of shock? He had suffered a good deal of pain, and had taken no food during forty hours; his assimilation had been interrupted, and he suffered pain during the previous four or five days. Was it exhaustion of the nervous system, and did the circulation and respiration stop for want of nervous power?

This is but an instance of frequent occurrence, where the autopsy throws but little light on the cause of death. The illustrious Cuvier died, after an illness of six days, of paralysis, showing itself first in the limbs and subsequently in the organs of respiration and circulation, and nothing abnormal was discovered in those organs, nor in the nerves and great nervous centres. Similar cases are on record where the nervous tissue was examined microscopically and nothing abnormal detected, nor any consequences of irregular circulation. In the case now reported there was no examination of the nervous system, and no reason to suspect appreciable modification of its tissues. We all recognize the fact that nervous power is exhausted by pain, and prescribe accordingly, but how different the power of bearing pain in individual cases—how difficult the appreciation of the force of vital resistance! We may regret here, as often we are obliged to do in similar cases, that a fuller history cannot be given; but it is believed that such details as are set down may be relied on. One point is of some interest, viz., frequent attacks of diarrhœa and no appreciable disease of the mucous membrane of the intestine, with grave disease of the liver, as illustrative of the agency of the bile in defæcation. We must recognize here, too, how little we yet know of the pathology of the liver. Is it the emunctory by which the effete matter of the nervous system is gotten rid of? and yet there were no symptoms of cholesteramia. Is the fatty degeneration of

the heart and kidneys to be attributed to faulty assimilation in consequence of perverted or defective action of the liver? It is easy to ask these questions. Will the members of this Society express their opinions, and try to answer them.

THE OFFICIAL ACCOUNT OF THE RUSSIAN EPIDEMIC.

UNTIL they are modified or contradicted by more trustworthy evidence, we must accept the answers made on the part of the Russian government to the inquiries of the English ambassador as the best account that has reached us of the nature, extent and causes of the St. Petersburg epidemic. Our readers well know that it is the common policy of a government to put the best face on an official account of the condition of its inhabitants, and that some allowance must be made for a praiseworthy desire to reassure the minds of both subjects and foreigners. But if we receive, even with some reserve, the Russian minister's account, it is quite clear that the present epidemic in St. Petersburg does not amount, either in extent or mortality, to what is popularly understood by "a plague." The *Times*, with its usual ignorance of the signification of medical terms, falls into an amusing mistake when it remarks, in reference to the catalogue of symptoms given by the minister, that "the 'buboes' characteristic, but not distinctive, of plague, are not mentioned." Jupiter ought to get the aid of Æsculapius before he writes articles on mortal ailments. The passage in the official document which tells of extensive phlegmons on the trunk and extremities, and of suppuration of the inguinal glands, often terminating in death, evidently failed to convey to the mind of the writer in the *Times* the faintest idea that such manifestations are identical with what our ancestors called "pestilential buboes." Of course, medical men know that bubo is occasionally seen in typhus fever all over the world, and that this fact is one of the main arguments in support of the theory that plague is only an exaggerated form of typhus, but whenever the symptom does occur in fever it may always be accepted as evidencing a high degree of malignancy. In fact, the whole account given by the Russian government fully warrants some measures of precaution in the case of sickly crews arriving from Russia.

* * * * We subjoin an abridgment of the Russian Ambassador's statement, which was published April 12. The questions to which it is an answer refer to the following heads:—

"*Nomenclature.*—The epidemic does not offer any new features of note, nothing unknown to science, no special form but the typhoid class with various known modifications; thus typhoid fever, petechial fever, bilious typhus fever (bilieses typhoïd of the Germans) *fièvre récurrente* (febris recurrens), *recurrirendes fieber*, of the Germans; relapsing fever of the English. Typhus and typhoid fever prevail

at St. Petersburg nearly every year in the autumn, and diminish towards the month of November—a period at which a great number of workmen leave the capital; towards the following months of March and April—the period of the return of the vagrant workmen to the capital—those fevers reappear, and always without offering any peculiarities unknown to medical science. The typhus which is now committing ravages does not differ from the fevers of which we have just spoken, except by a greater extension and a greater intensity of the symptoms which characterize it; yet other maladies, appertaining to the same species of typhoid maladies, have shown themselves for the first time at St. Petersburg, and the number of cases returned has exceeded that of the typhoid fevers during the months of November and December, 1864, and January, February and March of this year. They are bilious typhoid fever, and especially relapsing fever *(fièvre typhoide bilieuse,* and especially *fièvre récurrente).*

"2. *History of the Epidemic.*—Although the relapsing fever *(fièvre récurrente)* had never been observed at St. Petersburg, it has been previously observed in other localities. In 1840 that malady committed great ravages in Moscow, especially under a bilious form, and in 1857–58 at Novo-Archangelsk (Russian America), where it was studied by Dr. Govorlivoy, and last year it made its appearance at Odessa. At the present moment, while it prevails in the capital, it has also shown itself in various districts of the St. Petersburg radius (Novaïa-Ladoga, Gdow, Peterhoff and Tsarskoé-Selo), and on some points of the district of Novogorod, especially on the railway line, whither it seems to have been brought from the capital. But it is especially the petechial typhus which has committed ravages in this latter district, as also in the districts of Penza, Tauris and Kharkow; in some other districts (Astrakhan, Vitebsk, Minsk, Volhynia, Vladimir, Kalouga, Kieu, Koursk and Toula) the typhoid fever has attained but a slight development, and the returns do not show a high rate of mortality. With the exception of the epidemic of 1840 at Moscow, which was followed by the simple typhoid fever, in no part of Russia has the epidemic of the relapsing and bilious fever acquired any considerable development.

"3. *Contagion.*—The relapsing fever, simple and bilious *(la fièvre récurrente, simple et bilieuse),* has shown itself to be contagious, like the general typhus. Some doctors, surgeons, attendants and nurses have caught the malady in the hospital wards; as yet but two cases of death are reported among the doctors, and a few cases among the attendants and nurses. It is especially, as is the case with all epidemics, in the dwellings of the working men of the indigent classes that the contagion spreads, on account of the bad ventilation and the immediate contact with the clothing.

"4. *Causation, Symptomatology and Treatment.*—The origin of this epidemic may be attributed to bad hygienic arrangements; to the consumption of vegetables which have been grown under unfavorable

climatic conditions; to the immoderate use of spirits made from grain by the working and lower classes; to an unusual agglomeration of workmen in the capital towards last autumn, which occasioned a considerable crowding in their dwellings—a crowding very baneful to health, especially in the Russian climate. To these accidental causes there must still be added (and this is applicable to all epidemics) the frequent atmospheric variations, especially so common on the shores of the Gulf of Finland. The relapsing fever *(fièvre récurrente)*, which made its first appearance towards the end of last August at the rate of five or six cases daily, progressed rapidly. In November there were already no less than 500 cases of disease in the town hospitals; towards the end of January and at the commencement of February the epidemic had reached its height, as many as 150 persons being taken to the hospital in one day, and if we include the cases of ordinary typhus and other severe diseases, the number rose to 250 and even 300 per diem. We must, however, observe that this last number does not give the exact number of the sick, as for many days during the time requisite for preparing temporary hospitals numbers of sick had to remain in their own domicils. During the last week the number of cases of relapsing fever *(fièvre récurrente)* has considerably diminished, and the petechial typhus, the typhoid fever—to which the relapsing fever often turns in its second paroxysm—takes the place of the relapsing fever. At the present moment the average total admission into the town hospitals is from 100 to 150 per diem, including the petechial typhus, or typhoid fever, and other severe maladies. As regards the symptoms, the relapsing fever *(fièvre récurrente)* has shown itself under two forms—a simple form and a bilious form. Premonitory symptoms are always observed; the persons attacked have a shivering fit, sometimes two attacks at a short interval, sometimes a continuous attack. When the attack is over, the patient is much prostrated; he complains of headache, thirst, sickness *(mal au cœur)*, and want of appetite; vomiting occurs at times; the patient is generally constipated; the prostration then increases, and he suffers extreme pain in the extremities; however, these latter symptoms might not appear or might diminish in a short time; they are neither permanent nor constant. Generally speaking, this period of incubation is not of long duration; often after twenty-four hours only the disease displays itself in most distinct characters. The face has an altered appearance, the lines are depressed, the color of the face red with some and of a gray yellow with others; is sometimes icterical; the skin is hot and dry, the head heavy and burning. If a thermometer is placed under the armpit of the patient it marks 30 deg., 40 deg., and 41 deg. C., and this temperature is nearly the same all over the body. The tongue is generally moist, never quite dry; red at the edges and point, it is furred at its base. In the greater number of cases respiration is perfectly free, while in others the patient has a

slight cough without much expectoration. The abdomen is not much swollen, yet it is sensitive to the touch, especially under pressure of the left hypochondrium. The liver is much larger than in a natural state, as it often extends as far as the navel, and completely occupies the left hypochondrial region. The spleen is constantly enlarged. The invalid does not eat, and even shows disgust for every species of food, but he has intense thirst; the bowels are loose, and the motions do not show anything extraordinary—they are rather liquid than solid; the urine, passed without difficulty, is slightly acid, at times albuminous. The patient, much prostrated, is taken with giddiness, and cannot stand upright. The pulse is weak and slow; from 100 pulsations it reaches 130, at the rate of 140 pulsations per minute. Delirium very seldom occurs. The state which we have just described lasts four, seven, and even ten days; the patient then begins to perspire copiously, and that perspiration, accompanied by a most marked diminution of all the symptoms, continues sometimes from twelve to thirty-six hours; but the prostration remains the same, and the twitches of the muscles continue unabated. This state continues for many days, when suddenly cold ensues, followed by shivering fits, and they are followed by all the symptoms above mentioned, and torment the patient many days more. Yet, generally, this second attack is not so violent or so long as the first, and the patient enters into a state of convalescence. The convalescence is slow. Very often the patient has one or two relapses, apparently less violent, but leaving him in a most prostrate condition. In some rare cases death occurs in the first paroxysm—that is to say, before the second attack of shivering, consequent upon a cerebral or pulmonary hæmorrhage, or from acute meningitis, or from paralysis of the heart (Dr. Hermann, Aboukhoff Hospital). Later, the patient dies either from inflammation of the lungs, or rather from a stasis in the lungs, or from an abscess in the spleen or loins, flux from the bowels, or hydropsy. At the workmen's Hospital extensive phlegmons of the trunk and extremities have been observed, with suppuration of the inguinal glands, often resulting in death. Recently (as already previously observed) the relapsing fever at its second paroxysm has turned into typhus or typhoid fever. The second form of the malady—bilious relapsing fever—*La fièvre récurrente bilieuse*, may arise from the first just described; however, it shows itself at once. From the first day the patient is in an icterical state, he vomits bile, and has fearful headache. He becomes delirious, and remains in a prostrate state. This very dangerous condition does not always end in death, but convalescence is always slow. The autopsy has always shown that the seat of the malady is in the organs of the abdomen, especially in the spleen and liver, which are always greatly enlarged, and completely changed; sometimes the kidneys are also affected by this inflammation; a catarrhal affection of the mucous membrane of the stomach and bowels is also observable, which some-

times reaches the mucous membrane of the biliary channels, and which occasion icterical phenomena during life. Moreover, in complicated cases the results are found of inflammation of the lungs, of suppurative pericarditis and of hæmorrhage into the tissue of the spleen, even with the rupture of that organ. Men are more subject to the malady than women. The workmen who are addicted to drink have been chiefly victims to it. As yet no treatment suitable to every case has been discovered; the Physician who turns his attention to the fever and to the state of the abdominal organs succeeds best. Mineral acids (acid elixir of Haller) and chlorinated preparations are mostly preferred. Symptomatic and palliative treatment suited to local complications always find their indication; also laxatives, resin oil, calomel, warm applications, opium, &c., according to circumstances. Sulphate of quinine, recommended by some, has not always been attended with good results. But its usefulness was chiefly admitted as a palliative to relieve pain and as a strengthening remedy during the period of convalescence, where it has at times been used with preparations of iron, and nutritious diet, especially when anæmia had to be met with in the convalescence.'

"5. *Spread.*—If we take 500,000 as the approximate number of inhabitants, we have as a maximum during some weeks only of February 300 cases daily of relapsing fever, typhus and other maladies included. We add:—The number of admissions to the Hospitals in the last months of 1864 showed upon the admissions of the corresponding months of 1863 an increase of 30 to 40 per cent.; in January, 1865, it was 50 per cent. above those of 1864, and the number of admissions of February, 1865, exceeded that of 1864 by 100 per cent.

"6. *Mortality.*—It is not to relapsing fever that the greatest number of cases of death must be attributed, but to petechial typhus and typhoid fever. Thus, at the commencement of the epidemic, the relapsing fever showed the proportion of (1·20) one death on 20 sick in the Hospitals; in its greatest development it gave (1·12 and 10) one death on 12, or 10 sick and even less in some Hospitals. The petechial typhus always showed much more unfavorable proportions (1·5 and 1·4), one death out of five, or even four sick in some Hospitals. Generally, the number of deaths during the last six months of 1864, and January, 1865, exceeded that of the corresponding month of 1863 by *circa* 2,000. The relative mortality in the Hospitals had also greatly increased, especially during the first months of 1865. If, therefore, we compare the month of January, 1864, with the month of January, 1865, we find:—For the first (1·17) one death on 17 sick, and for the second (1·11) one death on 11 sick, comprising all violent and chronic diseases. It is evident, then, that if we only include the relapsing fever and typhus the proportion would be still more unfavorable.

"7. *Daily Mortality.*—The daily mortality from epidemic mala-

dies in the Hospitals from typhus and relapsing fever has not reached the maximum of more than 60 per diem, and the average has been 25 to 30 per diem."—*London Med. Times and Gazette.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JUNE 8, 1865.

Massachusetts Medical Society.—The annual meeting of the Society was held in this city on Wednesday, May 31st. The attendance of members was small, owing, in part, perhaps, to the greater interest felt in the approaching meeting of the National Association, but chiefly, we fear, to the omission of the annual dinner. We cannot help considering this a great mistake, and we trust that others living at a distance may not deem it a failing in hospitality on our part. While we have our frequent district meetings for medical improvement, the principal object of the general Society must always be the cultivation of mutual acquaintance and kindly feelings among physicians throughout the State, and without some such social occasion as a dinner this is clearly impossible. One gentleman very pointedly said, during the discussion upon the question of a two days' meeting in future, that he once attended a similar anniversary of the New York State Society, and at the end of the second day he believed he was acquainted with everybody there present, but that he scarcely knew a person among those he was at this time addressing. We hope that such a mistake may never be committed again.

The Society came to order at 10½ o'clock, the President, Dr. A. A. Gould, in the chair.

The report of the Treasurer was read.

Pleasant remarks were made by Dr. Hiram Corliss and Dr. A. L. Saunders, delegates from the New York State Society, and by Drs. S. H. Pennington and R. M. Cooper, of the Medical Society of New Jersey.

A resolution, presented by Dr. Bowditch, was adopted:—That a Committee be appointed, one from each county, to present a report, at the next annual meeting, upon spotted fever.

After a discussion upon the practicability of holding a two days' annual session in future, the following resolution, offered by Dr. Rice, of Leverett, was adopted:—

That a meeting preliminary to the annual meeting of the Massachusetts Medical Society be held on the Tuesday immediately preceding it, the time to be occupied in such a manner as may be determined upon by a committee appointed for that purpose.

The report of the committee appointed last year by the Council, upon the rules regarding Censors, was adopted, as follows:—That no board of Censors shall admit to membership any individual who is resident in another district, unless he presents a satisfactory certificate of character and professional standing from the President or at least two of the Censors of the district wherein he resides.

The annual address, which, in the absence of its author, Dr. B. E. Cotting, was read by Dr. R. M. Hodges, was a well-written production. The object of its writer was to show that disease is as much a natural and definite law of the universe as the phenomena of electricity and gravitation, and that consequently so-called primary or specific causes of disease have no existence. It is a divine plan, and has never been removed by the agency of man. We believe we have fairly stated the tenor of the address, but as to the fatalistic conclusions to which such views necessarily lead, and the character of the arguments offered in their support, we must in the present crowded condition of our pages be silent, promising our readers a more extended notice of the same when it has been published.

At the Councillors' meeting, held on Tuesday evening, the following officers for the ensuing year were elected :—

President, Dr. A. A. Gould. *Vice President*, Dr. H. L. Sabine. *Corresponding Secretary*, Dr. C. D. Homans. *Recording Secretary*, Dr. R. M. Hodges. *Librarian*, Dr. J. C. White. *Treasurer*, Dr. Francis Minot. *Orator*, Dr. G. C. Shattuck. *Anniversary Chairman*, Dr. W. E. Townsend. *Committee of Arrangements*, Drs. W. W. Morland, A. P. Hooker, C. D. Homans, R. M. Hodges and J. N. Borland. *Committee on Resignations*, Drs. Ayer, Minot and Ellis. *Committee on Publication*, Drs. Shattuck, Cotting and Morland. *Committee on Finance*, Drs. J. Homans, Durkee and Crane.

Boston was selected as the place for the next annual meeting.

American Medical Association.—The Association met at the Representatives' Hall in the State House, Boston, on Tuesday morning, June 6th, at 10½ o'clock. The meeting was called to order by the President, Dr. N. S. Davis, of Chicago, Ill., and prayer was offered by Rev. S. K. Lothrop, D.D. We have only space in the Journal of this week for the welcome address of Dr. H. J. Bigelow, Chairman of the Committee of Arrangements, and the address by the President. In our next number we shall give a full report of each days' session.

Dr. Bigelow's Address.

By direction and under the authority of the Committee of Arrangements, I bid you cordial welcome to the metropolis of New England. Sixteen years ago these halls were honored by your distinguished presence ; and since that time, although a bloody war has devastated the land, twice have you met together, under the sheltering protection of cities far distant from each other, to lay an offering upon the altar of science. We are now once again assembled, to unite in a single common sentiment of congratulation at the advent of peace, for which we have so long watched, and in whose genial sunshine the flowers of science may again expand.

The American Medical Association was at no remote period one of the prosperous institutions of the country. From a small and perhaps doubtful beginning, it had risen by a continuous and steady growth to become one of the successful enterprises of the age. The great cities of the North hailed its advent with acclamation, while further South the hospitable homes of Richmond and Charleston, of Nash-

ville and St. Louis, were thrown open for its warm and generous reception.

Such was our enviable position four years ago, when the demon of insurrectionary strife exhaled its poisonous and blasting breath over the fairest and most fertile portion of our common country. Cut off from intercourse with their Northern brethren, deprived of the opportunity of attaining light and truth, borne down by relentless exactions and unmerciful conscription, by devastating war and its inevitable sequels of poverty and bereavement, our Southern States have been to us for four years an alien and a hostile land.

During this long and weary period the steadfast edifice of the Republic has breasted the battle and the storm; an insidious and fatal bolt at last descending to rive its highest pinnacle. We recover from the shock to thank God, that as the tumult ceases and the smoke clears away, the grand old edifice still lifts its head among the nations, unshaken in its foundations, untarnished in its glory, an impregnable tower of strength, and the hallowed shrine of patriotism. The Southern States have at last succumbed before the persevering valor and terrible unanimity of the North, and the jarring elements have at last found repose, after the convulsions of a great transition period, not in the replacement of the old strata, but by the gravitation of the social system into the final and inevitable equilibrium of human rights.

While the whole country is occupied with the great and difficult problem of reconstructing the Union, that we may come out of this ordeal a wiser, a more stable, and a more prosperous people, it is for us to consider whether we cannot do something to render our own association a more efficient and a more productive institution. No one can doubt that the medical science of this country now ostensibly represented in this body, is destined one day to occupy a very high place in the medical history of the world. The American mind, the practical ability of which no one has ever doubted, is devoting itself more and more to the study, by exact experimental observation, of abstract truth, each year augmenting the number of medical philosophers devoted to scientific research at the sacrifice of professional and personal interest. It requires no prophet to foretel that they will identify this Association with illustrious labors whose magnitude and importance will henceforth keep pace with the invigorated growth of the Republic.

And who shall set bound or limit to the vast future of this country? If we believe with the great philosopher that "in the youth of a State arms do flourish; in the middle age of a State, learning," who that has witnessed the Titanic conflict between opposing hosts such as the history of the world has rarely seen confronted, who that contemplates the magnitude of this broad continent, its millions of acres of waving grain, the treasures buried in its bosom, the iron, the gold and silver, and coal and oil more precious than these; the great liquid highways that bind together North and South and East and West in one indissoluble bond of natural union; the energy of its people, the enormous territory now first thrown open to the intelligent efforts of free labor, who can fail to discern in these combining elements of prosperity the stalwart youth of a colossal nation? Let your imagination for a moment contemplate the vision of its maturity and manhood; when the great Western Valley shall become a central home of

letters and the arts, when the culminating light of science shall there shed its full effulgence, and the youthful giant of the Western hemisphere in his ripened strength and intellect shall challenge the place left vacant for him on our planet.

While the great Republic is accomplishing its political destiny, let us fail not to carry forward our corresponding mission of relieving human suffering, averting human disaster, and retarding human decay; not by deceptive assumptions, not by fallacious assurances, not by the dogmas which professional pride has set up, but by an earnest, impartial and discriminating pursuit of truth, and by an unwearied effort to divorce popular error from the companionship of legitimate science. It is our duty to lay here in solid labor the foundations of an association which for a century to come shall gather to a focus and radiate the light emanating from the best minds in our profession.

We rejoice to offer an earnest expression of our gratitude to those of our medical brethren, some of whom we are proud to see among us, who have stood so nobly at their posts by sea and land amid the carnage and the pestilence; and who, surrounded by the distractions of the camp and of the fight, have borne a conspicuous part, both by their active services and their literary labors, in upholding the honor and dignity of their profession.

Not less happy are we to see among us our brethren of those neighboring provinces, from which we have received such kindly tokens in our recent hour of national affliction. The people of this continent have so many common interests and common sympathies that no political landmarks can render them alien to each other.

I welcome you, gentlemen, in behalf of the Committee I have the honor to represent; of the old Massachusetts Medical Society, who cherishes a matronly regard towards her younger sisters of other States; in behalf of the city of Boston, which extends to you her civic hospitality. Welcome, friends and brothers! assembled from distant regions of our common land—from the great commercial emporium through whose aortic thoroughfare pours the ceaseless tide of nations, or from the city whose traditional brotherly love echoes so freshly from the lips of all our wounded soldiers; you, brothers of New England, born to the common heritage of toil and freedom; you whose home is by the great Western watercourses, whose blood sprang from the same fountain as our own, and has so often mingled with it again upon the battle-field; and you, few we may fear, but thrice welcome, loyal and faithful brothers of the South, who have passed through the long night of trial that you might hail to-day the glorious dawn of liberty. Welcome, fellow-citizens of the redeemed Republic, whose wounds you have bound up in binding up those of her defenders. Welcome all who honor us by their presence on this auspicious morning, which beholds the sacred emblem of liberty restored to its rightful places, tattered with bullets, stained with blood, fringed with the sable sign of mourning, but spread over every stronghold from which treason had struck it down, and soon to rekindle all its ancient glories.

Dr. N. S. Davis, of Chicago, President of the Association, then delivered his annual address, as follows:—

Dr. Davis's Address.

GENTLEMEN OF THE AMERICAN MEDICAL ASSOCIATION:

In entering upon the discharge of those duties imposed on me by your too generous partiality, one short year since, I was constrained to do it with expressions of deep regret, that the great struggle for subduing a gigantic rebellion was still continuing; and that in consequence, the seats of many of our professional brethren whose cordial hands and warm hearts had so often greeted us, were still vacant. Those expressions of regret were accompanied by the hope, that before the day for this annual gathering should come, the dark and desolating cloud of war would be broken, and give place to the radiant bow of peace, with former friendships restored and our national union unbroken. It is my highest pleasure to congratulate you, to-day, that what we then so fondly hoped for, is now substantially accomplished. The cherished flag of our country again waves in triumph over every part of our almost boundless domain; and the patriotic legions who have borne it, proudly, on so many bloody fields of human strife, are returning to their peaceful firesides, decorated with wreaths of victory and enshrined in a nation's gratitude.

But our congratulations, to-day, are still mingled with a deep shade of sadness. Sadness, that so many of our countrymen have been compelled to sacrifice their lives in defence of the integrity and perpetuity of our government; sadness, that so many of our professional brethren have been constrained to abandon the peaceful pursuit of their humane calling at home, and sacrifice comfort, health, and sometimes life, in the noble effort to mitigate the calamities and sufferings of war; and a deeper, more enduring sadness, that to the desperate wickedness of treason, has been added the darkest crime that can disgrace human nature, the deliberate murder of the Chief Magistrate of this great Republic. Let us hope, however, that in this act, the climax of human wickedness has been reached; that the cup of our national calamities has been drunk to its bitterest dregs: and with becoming humility, in the true spirit of our humane calling, let us implore the Sovereign Ruler of the Universe to make our reunion one of hearts as well as States; and our great nation, one in which labor shall everywhere receive its just reward, whether in the workshops and humble cottages of the North or on the sunny plantations of the South.

By a natural transition, the mind turns from these reflections to the work of Death in our own ranks, since our last annual interchange of greetings. A few months since, one who has filled the highest position in the gift of this Association, with unrivalled ability, and whose professional skill, ripe scholarship, and noble christian deportment, had endeared him to us all, was called upon to cease his earthly toil and enter upon a higher and a holier existence. And at the very hour when our profession was bowed in full sympathy with the national grief for the loss of its Chief Magistrate, our cup of affliction was made to overflow afresh, by the final departure of one, who, by universal consent, had occupied for many years the highest position, especially in the surgical department of our profession, not only in America but throughout the civilized world. Need I mention the names of Jonathan Knight of New Haven, and Valentine Mott of New York? After long lives, ardently and successfully devoted to the dearest interests

of humanity, full of years and full of honors, peacefully they have gone to their eternal rest. But their names, their works, and their noble examples are left to us and the generations that will follow. Nor has the work of the destroyer been limited to these; for within a few months past Thomas D. Mitchell of Philadelphia, William E. Coale of Boston, and Sylvester D. Willard of Albany, all members of this Association, and eminent in the profession, have been released from their earthly labors.

With this slight and imperfect tribute to the memory of those whom we shall see no more in our midst, permit me to occupy your attention with some reflections upon the past history, present organization, and future prospects of this great National Medical Association. In submitting these reflections, I shall assume neither the character of an eulogist nor a critic, but shall simply endeavor to draw such lessons from the actual results of the past, as will aid in the discharge of the duties of the present, that still greater benefits may be reaped in the future.

Twenty years have now elapsed since the Medical Society of the State of New York issued the call for the National Convention, from which our present Association had its direct origin. During that period of time, large, pleasant and harmonious meetings have been held in almost every section of our widely extended country, and both time and opportunity have been afforded for developing the actual interests and influences involved in our organization. It requires only a brief examination of our past career, to show that both in the principles of our organization, and in the practical results of our annual meetings, three important interests are directly involved; namely, the improvement of our system of medical education, the direct advance of medical science and practice, and the promotion of social intercourse and fraternal feeling throughout the entire profession. And the thoughtful attendant upon our meetings has not failed to observe, that each of these interests has uniformly attracted a due share of representatives. Indeed, most of the embarrassments attendant upon our past meetings, and the criticisms to which the Association has been subjected, have arisen from the difficulty of accommodating interests so important and varied, in such a manner as to satisfy the advocates of each, in the very brief time hitherto allotted to our annual meetings. Thus, whenever medical education became the theme of discussion, those more interested in the reading and discussion of papers and reports of a direct scientific and practical character, were ever ready to restrict debate, refer the subject to committees, or in some other way avoid what they regarded as a mere waste of time. On the other hand, if the reading of an elaborate scientific paper was commenced, the author would seldom complete the first half dozen pages before the zealous advocate of educational reform would dispose of the whole subject by a motion to dispense with further reading and refer the document directly to the Committee on Publication. While the good-natured lovers of good dinners and sight-seeing would always be ready to aid the other parties with their votes, and to secure the acceptance of every invitation to an entertainment, an excursion, or a public institution.

Under such circumstances, our records soon became cumbered with a multitude of reports and resolutions concerning medical education,

and the annual volume of Transactions plethoric with reports and papers that were read to the Association by their titles only; while the social entertainments reached a magnificence and costliness seldom equalled in any other relation of society.

The embarrassments felt from these circumstances led to frequent propositions to change either the constitution of the Association or its rules of business.

To avoid lengthy reports on general topics, all the standing committees on the different departments of medical science were first abolished, and a list of committees on special subjects substituted in their place.

To further economize time, an order was next adopted requiring every report and paper covering more than ten pages of manuscript, to be presented by a brief abstract merely setting forth its title and contents.

To check the evils of extravagant and costly entertainments, the Committee of Arrangement were instructed to omit all such from the programme of arrangements for all subsequent annual meetings.

The practical results of these changes were by no means satisfactory. The first led to the annual appointment of a long list of committees on special subjects, not one in six of whom ever furnished a report of any kind. The second speedily developed the practice of presenting reports and papers by their titles only, and often accompanied by the acknowledgment that they were still unfinished, followed by a vote that they be referred directly to the Committee of Publication. Thus, in many instances, not only deciding to publish papers of which the Association was profoundly ignorant, but which, at the time, had no actual existence except in the minds and memoranda of the authors. The adoption of the third, judiciously designed to check extravagance in social entertainments, has resulted only in exchanging one magnificent public banquet, occupying one evening, for three or four private ones every evening during the annual sessions of the Association. If we add to these considerations the fact that the greater part of the first day of each annual session, embracing one fourth part of the whole time, has been occupied with preliminary matters of organization, and the election of officers who were immediately required to enter upon the performance of duties for which they were often wholly unprepared, we shall readily perceive the reasons why the practical working of the Association, thus far, has not fully realized the wishes and expectations of many who have labored efficiently for its organization and support.

Some, who entered upon the work with the hope that the Association would be the agency for speedily securing the adoption of a uniform and elevated standard of medical education by all the medical schools of our country, and having in their own minds some favorite plan by which it was to be accomplished, having seen year after year pass without its adoption, very naturally conclude, from their standpoint of observation, that the Association is a failure.

Others, who entered with equal zeal upon the work of organization, with the hope that it would be the means of establishing in the profession of our country a spirit of original scientific investigation, a more complete elucidation of the causes and laws governing the prevalence of zymotic and epidemic diseases, and a higher standard

of medical literature, have found, in our short annual sessions and the little attention actually given to scientific and original papers, comparatively little to sustain their zeal, or to deter them from writing over our portals the word *failure.*

Therefore, it is not strange that we should meet here and there an unfriendly criticism, or the uncomplimentary remark that our annual meetings partake more of the character of "gormandizing and sight-seeing," than of grave scientific and professional inquiry; or in casting our eyes over the assemblages of the last three or four years, we should miss the presence of some who contributed so much to the interest and value of all our earlier meetings. But with a frank admission of the defects and embarrassments in the past practical working of this Association, does the conclusion legitimately follow that it has made so little progress in the accomplishment of the important purposes for which it was organized, as to demonstrate its inutility, or to create a well-founded doubt of its ultimate entire success?

To answer this question without prejudice, it is necessary to keep in mind the distinction between the accomplishment of a given purpose and the particular modes or plans by which it is to be attained. Many of the latter may be tried and fail, and the object sought may nevertheless be fully accomplished. It is probable that three-fourths of those who originally looked confidenly to this Association as the instrument for elevating the standard of medical education in this country, entertained the idea that it would be effected by some uniform plan embracing better preliminary education, longer lecture terms, more extensive clinical instruction, and more rigid examinations, to be formally adopted by the schools. And inasmuch as no such plan has yet been adopted, it is quite natural that those who had been regarding this as the only method for gaining their purpose, should regard the purpose itself as a failure. And yet such an inference would neither be a logical deduction from the premises, nor in accordance with the actual facts as they exist at the present time.

This will be fully apparent to any one who will compare the number, location and requirements of the medical schools of 1845 with those of 1865. At the former period from 13 to 16 weeks was almost universally adopted as the length of the annual lecture term. Now, the number of colleges in which the lecture term is less than 18 weeks, are few and unimportant, while some have extended it to five, and others to six months. Then, the number of chairs, or Professorships, was five and six, leaving the important branches of Organic Chemistry, Microscopic Anatomy and General Pathology entirely out, and usually making Physiology only an appendage to the chair of Anatomy. Now, the medical college that does not include all these in its curriculum, would be universally considered as behind the age. At the former period three-fourths of all the medical schools in this country were so located that their students could have no access, whatever, to any true clinical instruction at the bedside of the sick. And in those located at Boston, New York, Philadelphia, Cincinnati, and New Orleans, where adequate hospitals existed, the actual clinical instruction was generally limited to one or two visits to the hospitals each week. Now, this is so far reversed, that two-thirds of the whole number of our medical colleges provide some amount of true hospital

clinical instruction, and three of them at least are so directly connected with important public hospitals, that their courses of clinical instruction, in all the departments of practical medicine and surgery, are as full and as extensive as any of the other departments of medical science.

The extent and importance of the change in regard to clinical instruction will be rendered still more apparent by another mode of comparison. For instance, at the time of the organization of this Association, not only three-fourths of our medical schools were so located as to afford their students no access to hospitals, but a large majority of the whole number of students resorted to them for instruction. Thus, in the New England States there were, at least, six medical schools, of which only the one in Boston was located within reach of an adequate hospital; and yet its classes were often outnumbered by those at Pittsfield. While at the present time, if I remember correctly, the number of students receiving instruction in Boston with access to the Massachusetts General Hospital is nearly, if not quite, equal to that in all the other New England States put together. The time is fresh in my memory, when the number of students annually assembled in a medical college, located on the bleak hills of Herkimer County, in the State of New York, fully equalled those resorting to the schools directly in the great metropolis of that State. Now I think there is not a medical college maintaining an active existence in that State, which does not provide for its students access to a public hospital for clinical instruction.

What is true of New England and New York, in this respect, is equally true of the whole country.

When we remember, that of all the improvements in medical education, demanded by this Association from its primary organization to the present time, none were more prominent, clearly defined, or persistently urged, than an increase in the number of Professorships with an extension of the curriculum; a lengthening of the annnal lecture term; and the addition of full hospital clinical instruction both in practical medicine and surgery; we see how closely the improvements actually made correspond with the demands of the Association, and how nearly the objects sought have been already accomplished. It is true that they have not been accomplished by the formal adoption of any particular plan or concert of action, and perhaps not wholly through the influence of this Association; but that their accomplishment has resulted mainly from the strong concentration and persistent expression of public sentiment through this Association, there can be no reasonable doubt.

Neither has the influence of our organization upon the progress of medical science and literature been as feeble as many suppose. At the commencement of our associate existence, the number of original American medical works was comparatively small; and the universal complaint was, not only that American talent was spent only in the editing of foreign books, but that our own writers, even of the highest reputation, found it extremely difficult to find publishing houses willing to issue their works from the press. The able reports on this subject and on medical literature made to the earlier meetings of this Association, and the consequent general awakening of attention to it, throughout the whole profession, has resulted in so completely re-

versing the former state, that we now rarely see the name of an American writer appended merely as editor of a foreign work; while the medical press of our country literally teems with original medical works of high merit in every department of medical science. And not only so, but the shelves of the laborious practitioners of our humane art, throughout the whole country, now contains three American to one foreign work, especially in the departments of practical medicine, surgery, and obstetrics. And whoever examines the series of published Transactions of this Association, will not only find a number of essays, which for scientific merit would do credit to the investigators of any other country, but they will find much additional evidence that attention has been directed to most important inquiries concerning the causes and prevalence of epidemic diseases; the influence of topography and climate on endemics; and the nature and therapeutic value of indigenous articles of the materia medica, not only among our own members, but also throughout many of the State, county, and distant medical societies in every part of the country.

Socially, the success of our organization has been all that the most ardent could desire. It has not only removed local prejudices and sectional jealousies, but it has awakened everywhere the most liberal hospitality and the most cordial friendships. It has, indeed, made neighbors and friends of families whose homes are a thousand miles apart; while it has infused new life into many old State and local societies, and stimulated the profession to the formation of many new ones.

From a deliberate and candid examination of the whole past history of the Association, with a full appreciation of the embarrassments arising from short annual sessions, and imperfect arrangements for the transaction of business, I am fully satisfied that so far from having proved a failure, it has made such substantial progress in the accomplishment of every important object of its creation, as to afford the fullest assurance of its final complete success. Hence instead of entertaining doubts, or yielding to feelings of hesitation or discouragement, every friend of the social organization of the profession, and every advocate of advancement in its educational, scientific, and literary interests, should give it his most cordial support. Instead of abandoning the work of twenty years past, merely because it is not yet perfect, true wisdom would dictate the careful removal of such hindrances and imperfections as time and experience had developed, that the great and important work, itself, might be pushed more rapidly to completion.

Having carefully and anxiously watched the progress of this Association, from the incipient steps of its organization to the present time, I trust those assembled on this occasion will pardon me if I devote the remainder of this address to a brief and explicit statement of those measures, which seem to me sufficient, if judiciously executed, to ensure its complete success and perpetuity.

Although it is apparent that most of the evils and embarrassments which have attended our past meetings have arisen from an attempt to crowd a consideration of the educational, scientific, and social interests of the profession into the short space of three or four days, yet it is by no means desirable to abandon either of these interests in the future. The exact and all-important desideratum needed at this

stage of our progress, is such an apportionment of time to each of these interests as their relative importance demands; and the time allotted to each so systematically used as to develope the highest degree of efficiency in the results. To have a time and place for each legitimate interest, and to keep each in its place, is a matter of permanent importance in an organization so extensive as ours. Happily, the arrangement for attending to the scientific interests of the Association in sections, first carried into effect in 1860, and the amendments to the constitution adopted in 1864, have removed all impediments to the adoption of a most complete and efficient plan of operations at each annual meeting. Let the morning sessions of moderate length be devoted to the general business of the Association and the consideration of all matters relating to medical education, together with the simple presentation of all scientific reports and papers by their titles, that each may be referred to the section most appropriate for its consideration. Let all the afternoons and evenings, except one evening of each session, be set apart exclusively for the consideration of the scientific interests of the Association in the capacity of sections. This would leave only the one evening of each session to be devoted, in a formal manner, to purely social interests. To some, this limited time may seem insufficient. But if we remember that all such as are more interested in sight-seeing and mere social intercourse than in the advancement of science and literature, can gratify their preferences at any part of the meeting without interrupting either the general sessions or the sections, it will be conceded that the time specified is quite as much as the *relative* importance of the interest to be served requires.

But the arrangements for that evening should be such as would permit the most free and cordial intercourse. A public hall should be provided in which gentlemen and ladies could mingle and promenade freely; where each could seek out his old friends and make the acquaintance of new ones; where wit, repartee, and if need be, songs, sentiments and speeches could be made to enliven the evening. A simple stand might be placed in some corner, where all who wished could obtain a dish of ice-cream, strawberries or other fruit, and a cup of coffee. But there should be neither ostentatious show, nor rich viands, nor strong drinks, for the acknowledged guardians of the public health should not, especially in their highest representative capacity, themselves publicly violate the plainest laws of hygiene.

That part of our proceedings which has been the subject of most serious complaint, during the last few years, has related to the consideration and final disposition of such reports and papers as related to the scientific and practical interests of the profession. And it may appear to many that the time which has been indicated as proper to devote to those topics is still wholly inadequate for their proper examination and disposition.

If, however, all such papers and reports are called for and referred to the appropriate sections, before the close of the first morning session, as they certainly should be, it is confidently believed that adequate attention could be secured for every subject properly presented for consideration. If the order of business is so arranged as to accomplish this, the several sections can commence their work on the afternoon of the first day of each annual meeting, thereby

securing from three to four full afternoons and evenings for their important work; and if all the sections are properly organized and the subjects for consideration judiciously distributed among them, it will be equivalent in practice to a multiplication of these three or four afternoons and evenings by six; or a practical extension of the time devoted to the scientific interest of the Association to three or four weeks.

And in this connection I wish to call your serious attention to the more complete and efficient organization of these sub-divisions of the Association. As each section is authorized to choose its own officers and adopt its own rules of action, their existence should, by no means, be regarded as ended at the adjournment of each annual session. But a President and thoroughly qualified Secretary should be chosen for the entire year; and each should adopt a system of well considered rules which should govern the reading, discussion, and final disposition of all reports, papers and questions that legitimately come before it. Among the rules thus adopted, should be one, requiring every report and paper to be so far complete at the time of its presentation, that if deemed worthy of publication it can be passed from the custody of the section directly to the Permanent Secretary, without being detained by the author for either revision or completion. Another should peremptorily forbid the reference of any report or paper on a scientific or practical subject, to the Committee of Publication, until the same has been sufficiently examined by the section, to know its length, its actual contents, and the number and character of the illustrations, if any, that are to accompany it. If there should happen to be more papers referred to any one section, than could be fairly examined during the time the Association is in session, such surplus papers should be referred to judiciously selected sub-committees, with instructions to complete their examination and report on the same to the Permanent Secretary within thirty days after the adjournment.

The adoption of such rules, and the rigid adherence of each section to them, would accomplish two very important objects. First, it would more effectually guard against burdening the Association with the publication of matters appropriate only for the pages of an ordinary medical periodical, and would secure the Committee of Publication against unnecessary delays in the reception of such matter as should be actually designed for publication in the Transactions of each year. Second, by rendering it certain that every report or paper properly prepared and presented in time, would receive a fair hearing and consideration, a very much larger number of writers and investigators of ability would be induced annually to present the products of their labor for the consideration of the Association.

Permit me to make one more suggestion in relation to the sections, namely, that each section should be provided with either a skilful secretary or a professional reporter, who in addition to the simple record of proceedings, should preserve a correct summary of all discussions on scientific questions and papers, and report the same to the Permanent Secretary, that so much of it as was of importance could be published in connection with the papers to which it might relate, in the Transactions of the Association. This would not only preserve many valuable facts and observations in a small compass, but it would

present a strong additional inducement for the most active and experienced minds in the profession to attend and participate in the doings of the sections.

I hope the foregoing suggestions will be regarded as worthy of a prompt and careful consideration by the several sections of our present session.

I would also suggest to the Association the propriety of dispensing with the appointment of a long list of special committees annually, which seems to have served little other purpose than to advertise the names of those receiving the appointment; and instead thereof, allow each section annually to select such subjects for investigation, and appoint such committees to investigate them, as they may deem most profitable. This need not interfere in the least with the reception of voluntary communications on any subject, in the same manner as at present; and yet I am confident it would insure the selection of more important topics; cause them to be more equally distributed among all the important branches of medical science, and secure their more prompt and thorough investigation.

It should be a leading object of the scientific department of our Association, to awaken and foster in the profession an active spirit of experimental research and of rigid deductive investigation. It should also exert an important influence in directing such researches into the most profitable channels, by more carefully selecting the most appropriate topics for investigation from year to year.

If each section now provided for by our by-laws would perfect its organization and designate two or three important topics for investigation the coming year, it is certain that it would give to the scientific interests of this Association a scope and efficiency far superior to the present or any previous methods of procedure. It has also appeared to me that such a change might be made in the mode of disposing of the papers presented to this Association, as would liberally encourage contributions and yet greatly increase the scientific character of our annual volume of Transactions. According to my views, the volume of Transactions published to the world, by such an Association as this, should contain no papers except such as embody a complete deductive review of the topics discussed, developing and establishing important rules of practice; or the results of such well-devised series of experiments or observations as clearly indicate a positive addition to our stock of knowledge concerning some one of the departments of medical science. Such papers and reports as might be presented and referred to the several sections, which though neither complete as deductive essays, nor clearly establishing new facts, yet containing fragmentary items or cases of value, or suggestions worthy of further investigation, should be recommended for publication in such regular medical periodicals as their authors might choose; while such, only, as were found worthless should be returned to their authors.

It might be feared by some, that the adoption of such a rule of proceeding would make our annual volume of Transactions very small. Be it so. It certainly is not the *bulk* of the volume, but the *quality* of the matter it contains, which is to affect both our reputation and our usefulness. Perhaps one of the most important topics connected with medical science, which still needs elucidation, is the connection

of atmospheric conditions with the prevalence of certain forms of disease. But to properly investigate that subject, it is absolutely necessary to have a perfectly reliable register of the Thermometric, Barometric, Hygrometric, Electric and Ozonic conditions of the atmosphere, kept in each important geographical section of our country through a series of at least ten consecutive years, in direct connection with a corresponding record of the prevalence of the various forms of disease in the same localities. And I suggest whether, if the rule just mentioned in regard to the publication of papers in the Transactions, should so far diminish the size of the annual volume as to leave a surplus in the Treasury, it would not be more profitably spent in furnishing the necessary instruments and establishing the necessary records, to determine with accuracy, in a few years, the actual relations of appreciable atmospheric conditions to the prevalence and character of diseases, than in the publication of such papers as serve little other purpose than to increase the size of the volume of Transactions. Indeed, if capable and zealous members of the profession, furnished with the necessary instruments, could be employed in each section of the country, and the results of their observations carefully arranged, tabulated and reported to this Association annually; where, in the section on Meteorology and Epidemics these results could be closely scanned, and have added to them the more desultory observations of the profession generally, it could not fail to throw a flood of light upon the etiology of a large class of most important diseases.

With becoming deference I submit the foregoing suggestions for your consideration. They contemplate no changes in our Constitution or plan of organization; they propose the introduction of no new or untried schemes; but they have for their sole object, the removal of obstructions and objections which the experience of the past has demonstrated to exist, and the development of a more complete systematic and efficient method of transacting all the important business of the Association.

The great object is to perfect and perpetuate what has been, already, so well begun.

This great *National Medical Organization* has already existed long enough to have passed the dangers and uncertainties of its childhood, as well as the fickleness of its youth. It is time that its principles, its modes of action, and its important objects, were clearly defined, methodically arranged, and matured to the steadiness and vigor of early manhood. Many of the most renowned members of our profession, who took part in its organization and watched over its earlier years, have been gathered to the home of their fathers; and the nineteen years of active toil that has been added to the lives of many others, have carried them beyond the period of ardent active labor, to the more quiet era of ripening age. They still mingle with us, and at each returning anniversary meeting we hail their presence and crave their council, with the same joy and reverence, that characterizes the meeting of the filial son and virtuous father.

But the important question whether this Association, which has already accomplished so much for the advancement of the Educational, Scientific, and Social interests of our noble profession, and maintained a vigorous and unsullied career during the nineteen eventful years that are past, shall be maintained, its modes of action perfected,

and its beneficial influences constantly extended, depends entirely upon the generation who are now in the active, vigorous period of early manhood. If those of this class whom I now see before me, have imbibed the spirit of the founders of this Association, and will come forward with alacrity to the work of sustaining and perfecting what their fathers in the profession have begun, its existence will not only be perpetuated from generation to generation, but its beneficent influences will widen and deepen with every returning anniversary. Candor compels me to admonish you, however, that such a result can never be accomplished by any amount, either of good *wishes* or *fault-finding;* but by prompt, persevering, disinterested action. Let all those who desire to see the standard of medical education steadily elevated from year to year, continue to concentrate, and give expression to, public sentiment through the morning sessions of each anniversary meeting. Let all those who have been complaining for years past, that sufficient attention has not been given by the Association to scientific matters, appear promptly in the several section rooms this afternoon, and aid in organizing and putting into efficient operation each of those subdivisions of our organization. The very complaints and criticisms in which you have heretofore indulged, have demonstrated your appreciation of the work to be accomplished. Hence I feel the more freedom in cordially inviting you to an active participation in the good work.

If the generation, into whose hands are now passing the labors, the honors, and the responsibilities of our time-honored and most beneficent profession, will give faithful heed to these things, the American Medical Association will not only outlive whatever changes and convulsions may be in store for our loved country in the future, but its members will annually come up from the North, the South, the East and the West, to sit in social harmony, and plan additional means for alleviating human suffering, so long as civilization itself shall continue to bless the tribes of earth. Finally, let us all remember, not only while transacting the business of this Annual Session, but also in all the work that is before us in the future, that the great object of a virtuous and happy life, is neither worldly honors nor worldly treasures, but an inward consciousness of doing Good from day to day.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, June 3d, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	46	37	83
Ave. mortality of corresponding weeks for ten years, 1853—1863,	39.9	35.6	75.5
Average corrected to increased population - - - - -	00	00	83.47
Death of persons above 90 - - - - - - - - -	0	0	0

Deaths in Boston for the week ending Saturday noon, June 3d, 83. Males, 46—Females, 37. Accident, 1—inflammation of the bowels, 1—congestionof the brain, 1—disease of the brain, 4—bronchitis, 3—cachexia, 1—cancer, 1—consumption, 19—convulsions, 3—croup, 3—cyanosis, 1—diphtheria, 1—dropsy, 2—dropsy of the brain, 2—drowned, 1—dysentery, 1—malignant disease of the eye, 1—scarlet fever, 1—typhoid fever, 3—gun-shot wound, 1—disease of the hip, 1—jaundice, 1—disease of the liver, 1—congestion of the lungs, 3—inflammation of the lungs, 2—œdema of the lungs, 2—malformation, 1—marasmus, 2—paralysis, 2—premature birth, 1—puerperal disease, 2—smallpox, 3—teething, 2—thrush, 2—ovarian tumor, 1—unknown, 6—whooping cough, 1.

Under 5 years of age, 29—between 5 and 20 years, 8—between 20 and 40 years, 23—between 40 and 60 years, 10—above 60 years, 13. Born in the United States, 52—Ireland, 21—other places, 19.

THE

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American Medical Association.

SIXTEENTH ANNUAL CONVENTION.

PROCEEDINGS OF TUESDAY, THE FIRST DAY.

THE American Medical Association began its sixteenth annual convention at the State House, Boston, in the Hall of the House of Representatives, on Tuesday, the 6th inst. A large number of delegates and members were present, occupying the entire floor of the hall, while the galleries were occupied by spectators. The officers of the convention were as follows:—

President.—N. S. Davis, M.D., of Illinois.
Vice Presidents.—Wm. H. Mussey, M.D, of Ohio; Worthington Hooker, M.D., of Connecticut; William Whelan, M.D., of District of Columbia; J. E. B. Heintze, M.D., of Maryland.
Secretary.—William B. Atkinson, M.D., of Philadelphia.
Assistant Secretary.—Horatio R. Storer, M.D., of Boston.
Treasurer.—Caspar Wister, M.D., of Philadelphia.

Considerable time was occupied in the registration of the names of delegates, under the direction of Dr. J. N. Borland, of the Committee of Arrangements. At about half past 10 o'clock, the convention was called to order, and prayer was offered by Rev. Dr. Lothrop, after which Dr. Henry J. Bigelow, of this city, delivered the address of welcome, which was published in our last week's issue.

At the close of Dr. Bigelow's address, the roll of registered members was read by the Secretary.

It was voted that names of persons desiring election as permanent members, on presenting the proper credentials, be handed to the Committee of Arrangements, to be hereafter reported upon.

Communications from absent members were received.

The President then proceeded to deliver the annual address, as printed in the JOURNAL of last week, which was received with marked approbation, and at its close the thanks of the Association were voted to Dr. Davis, and a copy of it was requested for publication.

The President read a communication from Mayor Lincoln, inviting the members of the Association to an excursion down the harbor of

Boston to-morrow. It was unanimously voted to accept the invitation.

Papers and reports from special committees appointed or continued at the last session, being next in order, were called for, and the following were presented:—

On Insanity—Report by Dr. H. R. Storer, of Boston. Referred to the Section on Practical Medicine and Obstetrics.

On the Relations of Electricity to the Causes of Disease—Paper from Dr. Littell, of Pennsylvania. Referred to the Section on Practical Medicine and Obstetrics.

On Climatology and Epidemic Diseases of California—Reports by Drs. Logan, of California, and B. H. Catlin, of Connecticut. Referred to the Section on Meteorology and Epidemics.

On Alcohol and its Relations to Man—Report by Dr. G. E. Morgan, of New York. Referred to the Section on Practical Medicine and Obstetrics.

On Autopsies and their Relations to Medical Jurisprudence—Report by Dr. T. C. Finnell, of New York. Referred to the Section on Medical Jurisprudence.

On the Introduction of Disease by Commerce, and the Means of its Prevention—Report by Dr. A. N. Bell, of Brooklyn, N. Y. Referred to the Section embracing Hygiene.

On Exsections and their Relation to Conservative Surgery—Papers by Dr. Tewksbury, of Iowa, and Dr. Lyon. Referred to the Section on Surgery.

On Specialists and Specialties—The Committee were requested to report on Wednesday morning at 9 o'clock.

On the Rank of Medical Corps in the Army—Report by Dr. Tripler, U. S. A. Referred to the general session of Wednesday.

On the Rank of Medical Corps in the Navy—Report by Drs. Anderson, of New York, and others. Referred to the general session of Wednesday.

On Smallpox—Papers by Drs. Ramsey, of New York, and Nebinger, of Philadelphia. Referred to the Section on Hygiene.

Volunteer communications were now called for, and the following papers were presented:—

On Ophthalmology—By Dr. Williams, of Cincinnati. Referred to the Section on Surgery.

Extraction of Foreign Bodies from the Ear and Nose—By Dr. Turnbull, of Philadelphia. Referred to the Section on Surgery.

On Staphyloraphy—By Dr. J. Mason Warren, of Boston. To be read at 3 o'clock, P.M., on the 7th, at the Medical College.

On Surgery—By Dr. Henry J. Bigelow, of Boston. To be read at the Medical College at 4, P.M., of the 7th.

On the Functions of the Nerves of Sensation and Motion—By Dr. Haskell, of Rockport. Referred to the Section on Anatomy and Physiology.

On Dislocations of the Clavicle—By Dr. Holton. Referred to the Section on Surgery.

The Report on Specialties and Specialists, by Dr. Homberger, of New York, was assigned for consideration in general session at 9 o'clock on the 8th.

Eight o'clock was fixed as the hour for beginning the morning sessions of the convention.

Dr. W. Marsden, President of the College of Physicians and Surgeons of Lower Canada, was introduced, and made a brief address.

It was voted that a committee to nominate officers, consisting of one from each State, be appointed by the various delegations.

The chair announced that the Sections of the Association would meet in their assigned rooms at 3, P.M.

At fifteen minutes before 2 o'clock the convention adjourned.

In the afternoon the several sections organized by the choice of chairmen and secretaries, and proceeded to the consideration of the reports and papers referred to them.

Soirée and Promenade Concert at the Music Hall.—In the evening the members of the convention attended a soirée at the Music Hall, tendered to them by their professional brethren of Boston, and a few hours were most agreeably spent in social intercourse. The music on this occasion was furnished by Gilmore's full band, and by Mr. J. B. Lang, who exhibited the great power and beauty of the organ in his usual unsurpassed style. Many ladies graced the occasion with their presence. At 10 o'clock an elegant collation was served.

PROCEEDINGS OF THE SECOND DAY.

The second day's session of the Association was opened at 8.20, A.M., by the President, Dr. N. S. Davis, of Chicago. The names of the gentlemen chosen to nominate officers were reported as follows:—

Maine, Thomas A. Foster; *New Hampshire,* George D. Twitchell, of Keene; *Vermont,* H. D. Holton; *Massachusetts,* A. A. Gould; *Rhode Island,* S. Clapp; *Connecticut,* Elisha B. Nye; *New York,* D. W. C. Enos; *New Jersey,* Ezra M. Hunt; *Pennsylvania,* Dr. Mayburry; *Delaware,* James Couper; *Maryland,* Dr. Kenneman; *Ohio,* S. A. Almy; *District of Columbia,* J. M. Toner; *Indiana,* J. F. Hibberd; *Illinois,* John Bartlett; *Missouri,* J. S. B. Alleyn; *Iowa,* W. F. Peck; *United States Army,* J. J. Woodward; *United States Navy,* T. L. Smith; *Michigan,* H. A. Hitchcock.

Permission was given the committee to retire for consultation at 9 o'clock. The roll of the additional delegates registered since yesterday's session of the Association was read by the Secretary. The number present was then announced to be 468.

Dr. Cox, of Maryland, with a few preliminary remarks, offered the following preamble and resolution, which, he said, demanded the prompt action of the Association:—

Whereas, Montrose A. Pallen, whose name appears in the register as a permanent member of this Association, has been proved to have been in complicity with an attempt to poison the Croton dam, by which the city of New York is supplied with drinking water—thus imperilling the lives of thousands of his fellow citizens, therefore

Resolved, That the said Montrose A. Pallen has disgraced his manhood and the humane profession of which he is an unworthy member; that he is hereby dishonorably discharged from this Association; that the Secretary be required to strike his name from the roll of members, and that he shall never hereafter be eligible to membership in the American Medical Association.

Dr. Cox supported the resolution with a few forcible remarks. He said that to be arrayed in rebellion against the government of

the United States, either by sympathy with the insurgents, or open, active coöperation, is a crime, the extent of which can scarcely be estimated; but when is added to this the wholesale destruction of thousands of innocent people, men, women and children, by a mode unrecognized by any theory of modern warfare, and tolerated only in conditions of extreme barbarism, no repentance can wipe out the hellish enormity or admit of restoration to public confidence and respect. Dr. Montrose A. Pallen was a physician. In that title the world has been accustomed to embrace all that is benevolent and humane. When every other epithet of admiration had been exhausted in the case of one of the Saviour's disciples, he was called the "Good Physician." We have had since the days of Luke, thank God, thousands of the noblest examples of the healing art. When Desgenettes, the great French surgeon, was ordered by Bonaparte to destroy the plague patients of Jaffa by administering opium, he replied, "Sire, my business is to cure men, not to kill them." Pallen, without being ordered by a superior, volunteered the advice to destroy thousands by poisoning the common element of life in a populous city. Desgenettes deserves to be canonized in grateful remembrance through all ages to come—Pallen, to be pilloried in eternal infamy and disgrace.

The remarks of Dr. Cox were frequently interrupted by applause. The resolution was fully discussed, and several amendments proposed. A motion by Dr. Toner, of Washington, to postpone all action upon the resolution for one year, called forth a spirited debate, in which Drs. Loomis of Washington, Dewitt of New York, Martin of Worcester, Mayburry of Pennsylvania, Curry of Westchester, Cox of Maryland, and others, took part. Dr. Mayburry moved an amendment to the motion to postpone, so that the resolution might be referred to a special committee for consideration, to report on Thursday. The question then recurring on the original resolution, further discussion was had and several amendments were again proposed. The resolution, with several amendments, as finally adopted with a few dissenting voices, reads:—

Whereas, Montrose A. Pallen, whose name appears upon the register as a permanent member of this Association, has been declared, under oath, before the military commission sitting at Washington at this date, to have been in complicity with an attempt to poison the Croton Reservoir, by which the city of New York is supplied with drinking water—thus imperilling the lives of thousands of his fellow-citizens, therefore

Resolved, That the said Montrose A. Pallen has disgraced his manhood and the humane profession of which he is an unworthy member—that he is hereby indignantly expelled from this body—that the Secretary be required to strike his name from the roll of members.

It was voted that the final meeting of the Association shall begin on Friday morning at 9 o'clock.

A series of resolutions, offered by Dr. Garrish, of New York, of respect to the memory of the late Dr. Valentine Mott, were adopted by the Society.

On motion of Dr. Catlin, of Connecticut, a committee was appointed to prepare suitable resolutions on the death of Dr. Jonathan Knight, Dr. Benjamin Silliman, and Dr. Charles Hooker.

Reports and papers from special and other committees were next in order, and the following were presented:—

On the Rank of Medical Corps in the Army—Report by Dr. Tripler, U. S. A. Accepted and adopted. On motion of Dr. Cox, of Maryland, a resolution was adopted that the committee be continued, and that each member of this Association use his personal efforts with members of Congress to secure a more elevated grade for the entire medical corps in the Army.

On motion, it was voted that the report of the committee and the subject discussed therein be presented to the next Congress by the President of this Association.

On the Rank of Medical Corps in the Navy—Report by Dr. James Anderson, of New York, read by the Secretary. Accepted and adopted.

On motion, it was resolved that the committee be continued, and that the same course be taken with this report by the President as was voted to be taken with the report from the medical corps in the Army.

The report of the Committee on Publication was submitted by Dr. F. G. Smith. Appended to the report was a resolution authorizing the committee to assess each member such additional sum as will enable them to defray the expense of publishing the forthcoming report, provided the amount in the hands of the treasurer shall prove to be insufficient for the purpose. A protracted discussion followed upon the acceptance and adoption of the report, with the resolution as submitted. A motion to amend, limiting the assessment to one dollar, was lost; also a resolution offered as a substitute for the original resolution. Subsequently, the resolution as reported was adopted, with an amendment changing the word "assess" to "invite" to contribute.

The report of the Committee on Prize Essays was submitted by Dr. D. H. Storer, of Boston. It was announced that a prize had been awarded to the author of the dissertation on the "Surgical Treatment of Morbid Growths in the Larynx, bearing the motto "*quod vidi scripsi.*" On opening the envelope bearing the corresponding inscription, the author was announced to be Dr. Louis Elsberg, of New York.

The premium offered at the last annual meeting for "the best short and comprehensive tract calculated for circulation among females," on Criminal Abortions, was awarded to Dr. H. R. Storer, of Boston.

The Report on Medical Education was submitted by Dr. Antisell. Referred to the Committee on Publication.

The Report of the Treasurer was submitted, showing the amount in the treasury to be $301·95.

A paper on "Compulsory Vaccination" was referred to the Committee on Medical Jurisprudence.

The report of the Committee on Revision of the Constitution was submitted by the President of the Association, Dr. Parsons occupy-

ing the chair temporarily. The report was accepted and adopted, and the thanks of the Association were voted to the Committee for the satisfactory manner in which they had discharged their duty.

The Report of the Committee on Necrology was submitted without reading, and referred to the Committee on Publication.

During the session, the Secretary read the following names of gentlemen offered as candidates for election for permanent membership, reported by the Committee of Arrangements:—

Dr. O. H. Bradley, East Jaffrey, N. H., nominated by Dr. L. E. Simonds, Saxton's River, Vt.

Dr. F. Winsor, Winchester, Mass., and Dr. Ed. D. G. Smith, U.S.N., nominated by Dr. L. A. Smith.

Dr. R. H. King, Wolfsboro', Carroll Co., N. H., nominated by Dr. David T. Parker, Farmington, N. H.

Dr. Alba Kemp, New Salem, Mass., nominated by Dr. Ed. Barton, Orange, Mass.

Dr. C. D. Bemis, nominated by Dr. D. H. Storer.

Dr. Dryden Smith, Biddeford, Me., and Dr. John L. Allen, Saco, Me., nominated by Dr. M. P. Munroe, President of Maine Medical Association.

Dr. John Yale, Ware, Mass., Dr. David W. Miner, Ware, Mass., and Dr. J. W. Winslow, East Hampton, Mass, nominated by Dr. Martin, of Worcester.

Dr. Benj. J. Mann, Roxbury, Mass., nominated by Dr. J. L. Miller, Pittsfield.

Dr. J. H. Waterman, Westfield, Mass., nominated by Dr. Orcutt, Hardwick, Mass.

Dr. J. H. Longeuecker, nominated by Dr. Thomas Antisell, Surgeon Vols.

Dr. J. S. Lombard, Boston, Dr. J. Q. O. McCollester, S. Groton, Mass., and Dr. George Jewett, Fitchburg, Mass., nominated by Drs. Hitchcock and Dale.

Dr. E. W. Sargent, W. Tennessee, Dr. Edwin Segur, Springfield, Mass., Dr. Jefferson Church, Springfield, Mass., and Dr. Alexander S. McLean, Springfield, Mass., nominated by Dr. Worthington Hooker.

Dr. Samuel S. Webber, Boston, and Dr. J. B. Gould, Templeton, Mass., nominated by Dr. J. N. Borland.

Dr. Silas B. Presby, Taunton, Mass., nominated by Dr. J. R. Bronson.

The gentlemen were unanimously elected by the Association.

The Nominating Committee reported a resolution that the several sections shall select the subjects germain to their organizations, and also appoint the committees thereon.

A communication was received from Surgeon-General Dale, acknowledging, in behalf of his Excellency the Governor, the receipt of an invitation to attend the meeting of the Association, regretting his inability to be present. The communication paid a high compliment to the dignified character and importance of the Association, acknowledging the patriotic sacrifices of the profession during the rebellion, and trusted that the sessions of the Association would result in the advancement of the interests of medical science.

The Committee of Arrangements announced that Judge Warren, President of the Providence Railroad, had offered for the use of the Association a special train to Readville, for the purpose of visiting the military hospital there, at any hour that they might desire to use it. Also that the Superintendent of the Boston public schools had caused volumes of the recent report to be sent to the State House to be distributed to such gentlemen as might wish them.

Dr. Toner, of Washington, offered an amendment to the constitution, that delegates on registering their names shall pay the sum of $5, and permanent members, $3. The amendment, according to the constitution, lies over until next year.

The Committee on Nominations, through their chairman, reported that they had decided upon Cincinnati, Ohio, as the next place of meeting of the Association. Dr. Cox, of Maryland, offered an amendment substituting Baltimore, Md., for Cincinnati, Ohio. A spirited debate followed, and at length the motion to amend was carried, and Baltimore decided upon as the next place of meeting.

A committee was appointed to draw up a series of resolutions on the death of Dr. S. D. Willard, late Secretary of the New York State Medical Society, and also to prepare a short biographical sketch of his life, both to be submitted to the Committee on Necrology.

A communication was received from Dr. Gross, Surgeon in charge of the military hospital at Readville, inviting the Association to visit Readville by special train Thursday forenoon at 9 o'clock.

The convention adjourned at 2 o'clock. At the time of adjournment the number of names registered on the books was 576, and delegates were still coming in. The sessions of the several sections were held in the afternoon.

Social Entertainments in the Evening.—Dr. J. Bigelow, Dr. D. H. Storer, Dr. Warren, Dr. Shattuck, Drs. Dix and H. R. Storer, Dr. H. J. Bigelow, Dr. Upham, and Dr. Williams entertained the gentlemen of the Association, with their ladies, in an elegant and generous manner. Music, vocal and instrumental, charmed the ears of the guests, and every effort was made to make the evening agreeable and pleasant.

The residences of the gentlemen named above were visited during the latter part of the evening by Gilmore's Band, and serenaded in honor of their guests.

PROCEEDINGS OF THE THIRD DAY.

The Convention was called to order at 8¼, A.M., by the President.

On motion of Dr. Burns, of Pennsylvania, a resolution was adopted requesting the sections or committees to which papers had been referred, to use special judgment and discretion in assigning such papers to the sections to which they properly belong, and in selecting such as they may consider worthy of publication.

On motion of Dr. Mayburry, of Pennsylvania, it was

Resolved, That the Permanent Secretary be instructed to prefix to the List of Officers and Permanent Members, a list of the Ex-Presidents and Ex-Vice Presidents of the Association.

Dr. Jarvis, of Dorchester, inquired concerning the functions of the Committee on Publication. A discussion on this question followed, in which the President, Drs. Jarvis, Sayre of New York, Tripler and Hillard participated. By a vote of 45 to 37, a resolution was adopted giving the committee discriminating power.

On motion of Dr. Jarvis, of Dorchester, it was voted to establish a section on psychology.

Dr. Garrish, of New York, moved that a section on ophthalmic medicine be established.

Dr. Twitchell, of N. Hampshire, favored it. Dr. Williams, of Cincinnati, also favored the establishment of such a section, as there was need for thorough investigation of a science which had in the past ten years become as it were new, all the old landmarks having been swept away. The motion was opposed by Dr. Burns, of Pennsylvania, Dr. A. H. Stevens, of New York, and others. It was finally rejected.

On motion of Dr. Hibberd, of Indiana, the section on anatomy and physiology was abolished, the subject of anatomy being assigned to the surgical section, and that of physiology to the section on hygiene.

A resolution was offered by Dr. Couper, of Delaware, and read by Dr. Tripler, of the United States Army, that this society send a delegate annually to the convention of medical superintendents of insane establishments, and that efforts be made to cause a more intimate relation between the two organizations; the delegate to be selected by the President. Amendments to the Constitution to be acted upon at the next annual meeting were offered in relation to permanent members, delegates from local societies, and members by invitation.

The Committee on Nomination reported that the time of the next meeting shall be in June, and submitted the following list of officers:—

President, Dr. D. H. Storer, of Massachusetts; *Vice-Presidents*, Drs. James F. Hibberd, of Indiana; S. O. Almy, of Ohio; T. C. Dunn, of Rhode Island; W. P. Johnson, of the District of Columbia; *Assistant Secretary*, Dr. J. E. Morgan, of Maryland.

Committee on Arrangements, Drs. C. C. Cox, W. C. Van Bibler, Franklin Donelson, L. H. Steiner, George G. Miltenberger, William Whitridge, J. E. Morgan, all of Baltimore.

Committee on Publication, Drs. F. G. Smith, of Pennsylvania; H. F. Askew, of Delaware; William Mayburry, of Pennsylvania; W. B. Atkinson, of Pennsylvania; H. R. Storer, of Massachusetts; Caspar Wister, of Pennsylvania.

Committee on Prize Essays, Drs. Austin Flint, senior, James R. Wood, Ellsworth Elliot, E. Krackowitzer, D. C. Enos, all of New York.

Committee on Medical Education, Drs. S. D. Gross, of Pennsylvania; G. P. Twitchell, of New Hampshire; C. A. Pope, of Missouri, O. W. Holmes, of Massachusetts; Grafton Tyler, of District of Columbia.

Medical Literature (present committee continued over), Dr. Charles A. Lee, of New York; T. F. Rochester, of New York; C. C. Cox, of Maryland; Albert Smith, of New Hampshire; A. Nebinger, of Pennsylvania.

Committee on American Necrology, Drs. C. C. Cox, of Maryland; E. B. Stevens, of Ohio; W. F. Peck, of Iowa; H. Van Dusen, of Wisconsin; Noble Young, of the District of Columbia; Josiah Simpson, of the United States Army; J. C. Weston, of Maine; Henry Bronson, of Connecticut; Henry Noble, of Illinois; Charles Eversfield, of the United States Navy; William B. Fletcher, of Indiana; I. C. Hupp, of Western Virginia; J. Mauran, of Rhode Island; William K. Bowling, of Tennessee; J. P. Fitch, of New Hampshire; James Couper,

of Delaware; W. L. Linton, of Missouri; Charles L. Allen, of Vermont; H. G. Clark, of Massachusetts; J. H. Griscom, of New York; E. M. Moore, of New York; Charles A. Logan, of Kansas; William B. Little, of California; Stuart, of Minnesota; Henry Miller, of Kentucky; S. G. Armor, of Michigan; William Pierson, of New York; Fleming, of Pennsylvania; E. Wallace, of Pennsylvania.

The report was adopted as a whole, with the exception of the time of holding the next annual meeting. It was voted to meet on the first Tuesday in May, 1866, instead of June.

Dr. Allen, of New York, with a few explanatory remarks, moved that the vote adopting the resolution expelling Dr. Pallen be reconsidered. A sharp discussion ensued, and the vote being taken, the result was doubted. The yeas and nays were then called for by Dr. Sayre, of New York, so that the names of the gentlemen might appear on the record. The question being put, "Shall the yeas and nays be taken," was lost. A standing vote was taken, and the motion to reconsider was also lost.

Dr. Hooker, of Connecticut, from a special committee, reported the following resolutions on the death of Dr. Knight, Dr. Charles Hooker and Dr. Benjamin Silliman, all of Connecticut. The report was accepted and the resolutions adopted.

Resolved, that in the death of Dr. Jonathan Knight, twice a President of this Association, the duties of which office he discharged with extraordinary ability, the Medical Profession has lost one of its brightest ornaments; an eminent Surgeon who was conservative in the true sense of that term; a teacher, who by his transparent clearness and terse eloquence, unsurpassed among medical men in this country, exerted through fifty years a wide influence upon the character of the American medical mind; a Christian gentleman, whose genial qualities won for him to an extent seldom witnessed, the affections not only of intimate friends, but of all those who knew him.

Resolved, that in lamenting the sudden departure from this life of Dr. Charles Hooker at the height of his usefulness, we cherish the memory of one whose independent mind, restless activity of Christian faithfulness obtained for him great eminence, both as a physician and a teacher of medicine; and we call to mind with special pleasure his earnest devotion from the outset to the interests of this Association.

Resolved, that we revere the memory of Professor Benjamin Silliman, who as a leader in the diffusion of science in this country, and in other countries also, was one of the great benefactors of the race, and who by his urbanity, kindness of heart, and cheerful piety, enhanced to an uncommon degree his influence upon the community as a man of science.

Dr. Furman, of New York, presented resolutions adopted by the State Medical Society of New York, and referred to the National Medical Society, against newspaper advertising, except merely the card of the physician. The resolutions were laid on the table, to be taken up after the reading of the report of the committee on specialties and specialists, which was specially assigned for this time.

Dr. Julius Homberger, of New York, chairman of the committee on specialties and specialists, presented an elaborate individual report favoring advertising by specialists and opposing the same course by general practitioners. The report was laid upon the table for the present, and a second report was submitted by Dr. H. R. Storer,

of Boston, also a member of the committee, defending specialists, placing them in a high position. He presented strong arguments concerning the benefits and advantages of special investigations both to practitioner and patient.

Dr. D. Humphreys Storer spoke concerning a passage in the report relating to himself, denying that he was ever a specialist, though he did not object to any person being a specialist. Dr. H. R. Storer in reply defended his own ground. This report was also laid upon the table, temporarily.

Dr. W. Hooker, of Connecticut, another member of the committee, reported that he had not had sufficient time to investigate the report of Dr. Homberger, and therefore could not give an opinion concerning it. With the report of Dr. H. R. Storer he could not entirely agree, especially in that part of the report which referred to specialists as the leaders of the profession.

The reports were then taken from the table for consideration.

Dr. Martin made a motion that the reports be referred back to the committee for consideration another year, and supported his motion at some length.

Dr. Bissell, of New York, moved to amend the previous motion, and moved that the reports be referred to the committee on medical ethics.

Dr. Toner, of Washington, criticized the reports in a severe manner.

Dr. Homberger, of New York, defended his position, and stated as the reason why he did not send his report to the other members of the committee at an earlier date, that he knew they would not agree with him and would not sign it. His remarks were not received very favorably by the members.

Dr. Mayburry, of Pennsylvania, favored strongly the referring of the reports to the committee on medical ethics.

The question was then taken on referring the reports to the committee on ethics, and decided in the affirmative. On motion of Dr. Twitchell, of New Hampshire, the committee on ethics was instructed to report some definite action on this subject.

The convention adjourned at half-past twelve o'clock.

The Excursion down the Harbor.—The gentlemen of the Association, immediately after the adjournment of the business meeting at the State House, proceeded in a body to Commercial wharf, where they embarked in steamers Rose Standish and Russia for the purpose of taking an excursion down the harbor by invitation of the city council. On board of the Rose Standish, besides the members of the Medical Society, were His Honor the Mayor, and several members of the city council, part of the committee of arrangements, Chief of Police Kurtz, a number of invited guests, and Gilmore's full military band in their new uniform. On the Russia the Brigade Band was stationed. The party on both steamers numbered nearly, if not quite, 1000 people.

The two steamers proceeded down the channel side by side. As

the party passed the revenue cutter Pawtuxet, they were received with a salute, and the hoisting of the flag. The steamers acknowledged the compliment by dipping their colors and sounding their whistles. The boys on the Massachusetts School Ship filling the deck and rigging, cheered the excursion lustily and run up the colors. This compliment was also acknowledged by the Rose Standish and the Russia, and the cheers returned by the passengers.

The first landing of the party was at Deer Island, where they were received by Hon. Moses Kimball, chairman of the committee on public institutions, and were invited by that gentleman to walk through the House of Industry and examine it as much as they desired. They passed through the various rooms and departments, always finding the officers of the institution ready and willing to answer all questions put to them. The gentlemen expressed themselves well pleased with the workings of our public institutions, and especially noticed and commented upon the extreme cleanliness and neatness of every part of the buildings and also of the inmates. After about a half hour's time had been consumed in visiting the island, the party reëmbarked, and proceeded further down the harbor.

By the kind permission of Major H. A. Allen, of the Second United States Artillery, commanding the post at Fort Warren, the excursionists were allowed to land, but were requested by the Major to have no conversation with the prisoners. The gentlemen walked over the grounds, examined the extensive fortification and heavy armament with much interest. Gilmore's Band stationed themselves on the parade ground and played the national and other airs. The United States officers at Fort Warren were very attentive to the guests, and extended to them during their short stay every attention that was in their power. Maj. Joel Severns, of the U. S. Volunteers, is post surgeon.

About four o'clock the party reached Long Island and disembarked. In the "Cottage" and in the tents on either side tables were spread with all the delicacies of the season, and to this attractive feature the attention of the gentlemen was directed immediately upon landing.

After the very pleasant duty of relieving the tables of their burden had been performed, His Honor the Mayor mounted a chair, and calling the gentlemen to order, addressed the company in a speech full of the most cordial hospitality and generous appreciation of the standing and value of the medical profession. We regret that want of space prevents our publishing his remarks in full.

Mayor Lincoln was frequently interrupted with most emphatic applause and enthusiastic cheering. After partial silence had been restored, the Mayor called upon Dr. Davis, President of the Association, who was loudly cheered on taking the stand—or chair.

He said that he was exceedingly happy to meet the gentlemen under circumstances so pleasing to each individual around him. The assembly, he said, almost overwhelmed him with recollections of the past. The historic old city of Boston, which has sometimes been called the cradle of liberty, everything around us, not only the old shaft on Bunker Hill, but the old church, the old graveyard, even the by-ways and the crooked ways [laughter] moved him with pleasing recollections of the past. He was happy as he looked around him, as he stood with his feet, as it were, in the eastern extreme of our glorious Union, to see many who would recollect with him a similar excursion to this, west of the Mississippi, and the kind attentions which the Association received there. At this time it should

not be forgotten that away in the distant South, even in South Carolina, this Association has assembled and has received the same kind attentions. He would not dare to allude to this, even as a reminiscence, did he not know that the valor of our soldiers brought the South to our fold once again. [Applause.] He said that when his mind travelled over scenes and the pleasing reminiscences of the past years of the life of this Association, which has met in every section of our country, his heart was too full, and his tongue could not express his feelings. We may meet, continued the speaker, for good, to rack our brains in devising better medicines to alleviate the sufferings of mankind, but after all it is the social element in our conventions that makes them so attractive to us. In conclusion, Dr. Davis cordially thanked the City Council, in the name of the National Medical Society, for the generous attention extended to them.

Dr. Woodward, of the Surgeon-General's office, at Washington, was then introduced. He spoke concerning the medical profession in the army, of their perilous position and their devotion to their duties, saying that had it not been for the aid which our armies have received from the profession they would have been able to do but little in this war.

Dr. Storer, the newly-elected President of the Association, was then called for. He was introduced to the gentlemen by His Honor the Mayor in rather a peculiar manner, which caused much laughter. Dr. Storer, in speaking of his election as President of the Association, said that he had hoped that some other gentleman would have been chosen to represent the National Medical Association than himself. He said that he had not the presumption to suppose that he possessed qualifications which were not possessed by the great majority of the members of the Association, but he received the honor as a compliment to Massachusetts. Dr. Storer spoke of the social influence of these conventions. Dr. Worthington Hooker, of Connecticut, made a short speech, speaking in a happy manner of his State, Connecticut, and of the generous manner in which the Association had been treated by the city of Boston. Rev. Dr. Lothrop was the next speaker. In speaking of the medical profession, he said that in his opinion it stands at the top of the professions, and demands the highest gratitude from the infinite and incalculable service which it renders to mankind. Dr. Sayre, of New York, in a short speech, acknowledged the hospitality with which the Convention has been received in Boston. Short speeches were also made by Dr. Doherty, of Connecticut, Dr. J. P. Ordway, of Boston, Dr. Curry, of West Chester, N. Y., and others.

About half-past eight o'clock, the party again embarked on the return "voyage." As the steamers left the wharf, rockets and other fire works were discharged from their decks, and the bands performed favorite airs. The sail home by moonlight was exceedingly pleasant, and the time was occupied in listening to the fine music of the bands, and to singing, conversing, &c. As the steamers passed the pilot boat No. 7, that vessel burned brilliant blue-lights, which were noticed with cheering. On landing at Commercial wharf, the passengers of the Rose Standish formed in procession and marched to the Tremont House to the music of Gilmore's band, where they separated.

The committee of arrangements of the City Council deserve much credit for the admirable manner in which the arrangements for the excursion were carried out. Every thing that could be thought of for the comfort and enjoyment of the company was provided.

PROCEEDINGS OF THE FOURTH DAY.

The Association was called to order at 9 o'clock by the president. Reports from sections were received and appropriately referred, and it was voted that such bills as might be presented therein should be paid by the treasurer of the association. After the transaction of some unimportant business, Drs. Leidy, F. G. Smith and H. Hartshorn were appointed a committee on the paper of Dr. Colt, on "the microscope."

Dr. J. P. Ordway, of Boston, presented a protest against the action of the association in adopting the resolutions expelling Dr. Montrose A. Pallen. After the words of the resolution the document reads as follows:—

Whereas, the association has refused by vote to reconsider its action in this behalf, now, therefore,

We, the undersigned, in attendance, while we execrate the crime with which Dr. Pallen stands charged, and would, if his guilt were established, most promptly and heartily vote for his expulsion, do most respectfully protest against the action of this association, as above recited, on the general principle that all sense of right and justice, as well as the established rules of this association, demand that no man shall be condemned and punished until his guilt is established. And we desire that this protest shall be placed upon the record in the minutes of the proceedings of this annual meeting.

Signed by Drs. James F. Hibberd, Henry I. Bowditch, Geo. B. Twitchell, and about thirty other gentlemen.

The ground taken in the protest was ably defended by Dr. Ordway, and after some discussion, on motion of Dr. Hunt, of New Jersey, a special committee of three, consisting of Drs. Hunt, Bibben, of New York, and Baxter, U. S. A., were appointed to prepare an answer to the paper.

A letter from Dr. W. H. Mussey, of Cincinnati, was read by the president, which severely censured the "course of Surgeon-General Barnes, in consulting with a homœopath in the case of Secretary Seward and son, and allowing a quack to prescribe medically whilst he was attending surgically," characterizing it as an "offence of no mean proportions; the high position of the parties making the demoralizing effect the greater." The facts alleged in the letter were declared to be without foundation by Dr. Woodward, of Washington.

At this point His Excellency the Governor of the Commonwealth, preceded by the Sergeant-at-Arms, and accompanied by Assistant-Surgeon General Hooker, entered the hall, and was received by the association, the members rising in their seats. His Excellency was introduced by the president, and addressed the association as follows:—

Mr. President and Gentlemen of the Convention:—I did not presume to enter the hall with the intention of interrupting the proceedings of the body which has met beneath the arches of the Hall of the House of Representatives, but for the purpose, in the first place, of testifying by my presence and my voice, and to respectfully acknowledge, the honor conferred upon me by the convention in the invitation to attend and to address this meeting on the morning of its first convening. Having been prevented by illness from doing so, I felt it due to myself and the body assembled to avail myself of the earliest practical moment of passing a short time in the presence of this large assembly of the most learned and wisest of the medical profession; but more, I must say, I felt it to be due to the Commonwealth, one of whose official representatives I am, to testify in praise, and with emphasis also, to the interest which it attaches to such meetings of gentlemen of the learned profession of medicine. The interest it attaches to it, not only from its relation to the cause of science, but in relation to the cause of popular progress in many of the departments of human learning. The interest, also, which it attaches to the medical profession in its relation to the patriotism of the people, since that profession represents the body of men whose devotion, whose energy, whose skill, whose ability and whose usefulness have not been surpassed, during these last four years of Southern war, by any similar number of citizens of the United States. [Applause.] And I trust, Mr. President, that this meeting in the city of Boston will be but the introduction of your association to the city, and

that the capital of the Commonwealth may witness many returns of a similar reunion. And I hope that wherever your honorable body may meet hereafter, it will receive the same cordial welcome of an intelligent people capable of appreciating learning, capable of understanding adequately and valuing the contributions of such men, alike to the health and morals, and to the sentiments of the people. For I believe, sir, that reasonable, progressive and philosophic views, in regard to the treatment of disease, or deranged health in all the forms of altered life, are both useful in respect to that which is perishable in our mortal bodies, and in respect to that which is eternal in the immortal mind. [Cheers.] I am happy to learn, Mr. President, that the meeting of the convention has been attended on the present occasion with so many circumstances of interest and value, and cordially thanking you for this opportunity of addressing the convention and wishing the body themselves future happiness and prosperity, for many years to come, I have the honor to take my leave. [Cheers.]

At the conclusion of his address His Excellency retired, and the association resumed its business.

The committee appointed to prepare an answer to the protest in the case of Dr. Pallen, reported as follows, through its chairman, Dr. Hunt:—

We, the undersigned, beg leave to recommend the following reply to the protest of certain members of the American Medical Association against the action of the said association in the case of one Montrose A. Pallen.

We remark, first, as to the right of protest in an association of this kind, that it is one which needs scarcely ever to be exercised, and the use of which is in general a bad precedent. When a motion is fairly before a body, is carefully considered and then deliberately acted upon, that submission to law and to a majority which is important to be cultivated as a principle, and which is particularly needed to be exemplified by prominent men as the grand lesson taught by the times, should lead the minority to be content to express their dissent in the usual method. With due deference to those who signed the protest, we cannot but express our regret that, while in the course of years many points have been discussed before this body, involving direct medical interests, and yet have been left to the decisions of the majority, so far as we know, the first case calling forth a protest is in the behalf of a man, in reference to whom we had the distinct statement from Dr. C. C. Cox, of Maryland, that he early in the war left St. Louis in the interests of the rebellion, and that the testimony in the case referred to was explicit in reference to his complicity with the attempted crime. We at least exercise no right not already granted to these protestants, in expressing our dissent from the propriety of their action in not submitting to the decision of this body after the question was once discussed, and then twice after reconsidered and the former action reaffirmed, and that too in the absence of the gentlemen who were the movers of the resolution. Secondly, we beg leave to notice the fact that the protestants have erred, as to matters of fact. The association has in no way formally declared that no sufficient proof had been adduced of the guilt of Montrose A. Pallen. The fact that the word proved was amended by the insertion of the words "has been declared under oath" is merely the difference between the legal issuing of a case and that kind of evidence which is entirely satisfactory and conclusive to even a guarded public sentiment. It was on this evidence and on the statements and opinions of members that the association saw fit to base their action. They felt that the course of Pallen, previous to this averred act, and the testimony in the case, were sufficient grounds for their action. There are times when a man may be known by the company he keeps, and in such a barbarous wickedness as the one involved, the whole testimony and evil association justify us in this action.

If the case was one that could be tried by us, so much the better; but the grounds of suspicion are so enormous, as in our view to justify our course of action. We are not injuring him, for the cloud already upon him is one to which ours will not add a feather. We are but protecting ourselves. When the evidence of mistake is shown, we will gladly acknowledge our error and retrace our course. But is it not best to separate from our association one who has been in intimate association with the vilest enemies of humanity? We have high ideas of personal rights, but one who has been in leagued friendship with those making the boldest attack on the dearest personal rights of universal humanity cannot complain, until his character is vindicated, that he is cut off from association with those who by profession, as well as by their manhood, are philanthropists and patriots. While we agree to the general idea that no man shall be

condemned and punished until his guilt is established, we look upon guilt as having degrees, and as sometimes being established independent of the decision of courts; and in cutting him off from the association, we do not recognise ourselves as "condemning and punishing him" in the legal and opprobrious sense in which those terms are used when one is consigned to the prison or the gallows; but as protecting ourselves from the odium of association with one who, we have evidence enough to satisfy us, has chosen as associates not only rebels, but assassins, and who while he is unable to clear his skirts, is not particularly jeopardized in life, liberty or the pursuit of happiness by our act.

The president then announced that he had received the following telegraphic despatch from Montrose A. Pallen:—

MONTREAL, CANADA EAST, JUNE 9.

To the President of the National Medical Association:—I have been expelled from the association upon unrebutted testimony for participating in a crime which I execrate as much as any gentleman in the convention. I will produce affidavits to prove Sandford Conover's evidence to be infamous perjury. I beg a reconsideration of the vote, and that it be referred to a committee before whom I pledge myself to still preserve the fair fame belonging to every member of the association. MONTROSE A. PALLEN.

A motion was made to accept and adopt the report of the committee as the sense of the association. The motion was discussed at some length, and finally laid upon the table.

A special committee on insanity was appointed, consisting of Drs. Alfred Hitchcock, of Massachusetts; Isaac Ray, of Rhode Island; S. H. Tewksbury, of Maine; B. F. Barker, of New York; and J. S. Butler, of Connecticut.

The secretary read the following resolution offered by Dr. Garrish, of New York:—

Resolved, That the American Medical Association, with heartfelt and national pride, extend to the Army and Navy Surgeons their thanks for the prompt manner in which they have met the calls and perils of the battle-field, demanded by our country.

Resolved, That we tender to the families and friends of those who have sacrificed their lives in the cause of humanity, our earnest sympathies for the bereavement they have sustained. They have restored to us and the whole nation a peaceful and happy home for all future time.

The resolutions were adopted.

On motion, the duty of revising the list of permanent members for republication was referred to the committee on medical necrology.

Dr. Burns, of Pennsylvania, presented the following resolutions, which were unanimously adopted:—

Resolved, That the American Medical Association, in closing their annual session in the city of Boston June 9th, 1865, do most sincerely tender a vote of thanks to their medical brethren, the Governor of Massachusetts, city authorities and inhabitants of Boston, for their very kind and generous hospitalities to the assembled delegates from all parts of our country; and in bidding them farewell we shall ever cherish the remembrance of their kindness, and express the hope that prosperity, with every domestic, social, intellectual and religious blessing may be their abiding portion.

By Dr. Kennedy, of New York, resolutions were offered as follows:—

Resolved, That the thanks of the American Medical Association be and are hereby tendered to His Honor Mayor Lincoln and the authorities of the city of Boston for the kind reception and splendid entertainment given to the association during their stay in the city.

Resolved, That the thanks of the association are due, and are hereby presented, to the committee of arrangements of the association for the faithful and satisfactory manner in which they have discharged the arduous duties imposed upon them.

Resolved, That the thanks of the association be presented to our president, Dr. N. S. Davis, for the singularly able and impartial manner in which he has discharged the duties of his office.

The following was offered by Dr. Van Kleek, of New York:—

Resolved, That this is a National Association, and as, in its earlier days, we enjoyed with pleasure and profit the intercourse with our professional brothers of all parts of our country, and as the unhappy feud which for four years divided the nation, has now ceased and peace has again come, we trust forever,—so we hope soon again to meet our

members and delegates from the South on this platform of fraternalization, and to this end we extend to them an earnest invitation and promise them a cordial welcome.

The following by Dr. Bowditch was offered by Dr. Hibberd:—

Resolved, That this association has learned with deep regret that there are fears of famine and consequent disease and pestilence occurring in some parts of Georgia and South Carolina, passed over by Gen. Sherman's army in its victorious course.

Resolved, That this association would urge upon the Sanitary and Christian Commissions to send agents to learn the exact facts, and, if need be, to take prompt and efficient measures to prevent or mitigate such a distressing result.

The following was offered by Dr. Bronson:—

Resolved, That the thanks of this association be and they are hereby tendered to Major John Morrisey, the Sergeant-at-Arms of the Massachusetts Legislature, and his assistants, for the very able and efficient manner in which they have performed the functions of their offices during the sessions of the association.

The resolutions were all unanimously adopted.

The venerable Dr. Child made a short address, speaking as follows:—

I feel extremely gratified that I am permitted on behalf of the State Medical Society to be present on this occasion, and I have also been extremely gratified in the proceedings of the association; and, permit me to say, very much so as respects the management of the presiding officer [cheers]; and I would unite in expressing the thanks of the association for the worthy manner in which he has performed his services, and I hope a reply will be heard from him on this parting occasion. [Applause.]

The president of the association, Dr. Davis, then delivered his farewell address, which was as follows:—

Gentlemen:—I thought when I was down upon the island under that cottage roof, posted upon a chair, that the emotions within me were such as almost entirely to forbid utterance; but I confess, notwithstanding the warm congratulations and cordial feelings which surrounded us there, they have fallen below what you have put upon me to do, at the close of this meeting, in the manifestations of your approval of the manner in which I have been permitted to discharge the duties of my office. Compelled last year by the amendment of the constitution to serve two years in these same labors, I find so warm a manifestation of your approval as surely will never be forgotten by me; this time has been an enjoyment that will leave its impress upon the deepest recesses of my heart while I am permitted to live, no matter what may be the vicissitudes that await me in the future, or changes which may take place in this our national organization. The feelings which have been impressed upon me here will remain unobliterated while time lasts, and I fondly hope will not be wasted while eternity itself shall endure. But, gentlemen, I must in turn offer my most cordial thanks to every one of you, for if we have had excellent meetings, it is not so much that I occupied the chair, but it is because you, every one of you, have kindly sustained me in the discharge of my duty, and therefore, I say, I am as much indebted to you, and far more than you are to me; therefore I give you my thanks. And I tender my thanks cordially to the city of Boston and to all those in the vicinity, for the manner in which I, as an humble individual, have been treated. Before I close, let me make one more observation. I have been very strongly impressed for twelve months past with the feeling that this association had arrived at a crisis of its existence; and I have felt at the opening of the session, this meeting here in the old cradle of liberty, almost in sight of the waves of the Atlantic, would determine whether this association was to be perpetuated to the latest generations, gathering the profession from the four quarters of the continent, not merely from East or West, or North or South, but from the whole continent, and uniting it in a common brotherhood for defending the interests of humanity, as long as civilization itself shall endure—or whether we should culminate, and, like the transient meteor in the heavens, make our mark and fade away. And I felt strongly impressed at the time because I saw many aged among us, and many young who looked to the aged, and because they did not come up to their expectations fully were hanging back, and inquiring why? And it seemed we had arrived exactly at the period where the association was about to be transferred from one generation to the next, and as I commenced very young I felt that I stood as a connecting link, that my right hand was on the shoulder of the aged and my left upon the shoulder of the younger members of the profession, and if I could hold them together and put the burden of the association over from the shoulders of the one fairly upon the other, I felt that it would stand firm through the coming trial. My brethren of the profession, I feel that the crisis

has passed. [Cheers.] The association is established upon the firm shoulders of the next generation. I am sure they will pass it to the next and along to others as long as civilization shall exist, therefore I cordially sympathize with you in all the enjoyments of this occasion; and I hope while I am permitted to live and be able to go by steam-ship or rail-car, that I will find time to enjoy a green oasis every year in meeting you as long as age shall let me linger with you. [Cheers and applause.]

At the close of the address of Dr. Davis, three hearty cheers were given for that gentleman.

At a quarter past one o'clock, the convention adjourned to meet again on the first Tuesday in May, 1866, in the city of Baltimore.

The annual meeting of the Association of 1865 has been more largely attended than on any previous occasion, six hundred and sixteen members and delegates having registered their names on the books of the committee. It is generally regarded as having been a most interesting and successful convention.

A Visit to the Readville Hospital.—After the adjournment, a considerable number of the physicians availed themselves of an invitation which had been received to visit the U. S. A. General Hospital at Readville, free passes having been tendered by the Providence Railroad Company. On the arrival of the party at Readville, they were welcomed by the surgeon in charge, who, with his assistants, afforded the visitors every facility for examining the institution. The officers of the hospital are now as follows:—Dr. Gross, Surgeon of Volunteers, in charge, and Acting Assistant-Surgeons Wilbur, Langmaid, Osborne and Ropes.

MEETINGS OF THE SECTIONS.

Section on Medical Jurisprudence and Hygiene.

The Section was organized by calling Dr. G. F. Hibberd, of Indiana, to the chair, and appointing Dr. R. Burns, of Penn., Secretary.

The "Report of the Committee on the Value and Necessity of Vaccination and Revaccination for the Eradication of Smallpox" was considered, and after slight amendment was endorsed for publication.

The paper of Dr. Nebinger on the Treatment of Smallpox was read and discussed, and endorsed for publication, after revision by the author.

The paper of Dr. Toner on Compulsory Vaccination was considered and discussed, and endorsed for publication, after revision by the author.

The "Report of the Committee on the Introduction of Disease by Commerce and the Means for its Prevention," was considered, and endorsed for publication.

The following questions were proposed by the Committee for consideration at the next annual meeting, and were referred to the gentlemen named below to report upon:

Comparative Value of Life in City and Country.—Edward Jarvis, Massachusetts; J. H. Griscom, New York; E. M. Snow, Rhode Island.

Drainage and Sewerage of Cities in its Influence on Health.—Wilson Jewell, Pennsylvania; Cyrus Ramsey, New York; Josiah Curtis, Massachusetts.

What Effect has Civilization on the Duration of Human Life?—A. A. Gould, Massachusetts; W. F. Peck, Iowa; Z. Pitcher, Michigan.

On Disinfectants.—E. M. Hunt, New Jersey; A. N. Bell, New York; J. C. Smith, New York.

Central Committee on Vaccination, continued.—A. A. Bell, New York; J. P. Loines, New York; H. D. Bulkley, New York; A. Nebinger, Pennsylvania; J. F. Hibberd, Indiana.

Practical Medicine and Obstetrics.

In the Section "on Practical Medicine and Obstetrics," Dr. Zina Pitcher, of Michigan, was elected Chairman, and Dr. Ellsworth Eliot, of New York, Secretary.

The Report of Dr. A. Fisher, of Illinois, "On the Sulphites of Lime and Soda in the Treatment of Hospital Gangrene, Phlebitis, Erysipelas and other Zymotic Diseases," presented last year, was referred for publication.

Dr. H. R. Storer, of Massachusetts, read a paper on Insanity, omitting some portions thereof. A motion was made to refer it to the Committee on Publication. Dr. Hooker, of Connecticut, moved that the Committee omit all matter of a personal character. Remarks were made by Dr. Jarvis, giving statistics tending to show that the positions taken by Dr. Storer were open to question. In reply, Dr. Storer read the statistical portion of his paper, and disclaimed the remotest intention of personality. The amendment of Dr. Hooker was lost, and the motion to refer carried.

The Secretary read a portion of a paper "on the Relation which Electricity sustains to the Causes of Disease," by S. Littell, of Wills Ophthalmic Hospital, which was re-

ferred to a Committee appointed under the following resolution, offered by Dr. Loomis, of Washington, D. C.:—

Resolved, That a committee of three be appointed, to report on the "Relation which the Doctrine of the Correlation and Conservation of Forces bears to the Physiological and Pathological Conditions of the Human System."

The following persons were appointed the Committee:—Dr. Loomis, of Washington; Dr. Jacobi, of New York; and Dr. Littell, of Pennsylvania.

Dr. H. R. Storer requested that Dr. Elsberg, of New York, be permitted to exhibit a case of laryngeal disease. Dr. Elsberg's paper was referred to the Committee on Publication.

The Secretary presented the following resolution:—

Resolved, That the Secretary recommend to the Association the following resolution for adoption:—That the Committee on Publication be requested to adopt such appropriate measures as will insure a speedy and general circulation of the Prize Essay on Abortion, provided this can be done without expense to the Association.

This was adopted.

It was also resolved, that the Chairman should appoint a committee to report, at the next annual meeting, on the progress of medical science during the ensuing year. The following gentlemen were appointed:—J. C. Smith, New York; J. P. Ordway, Massachusetts; E. M. Hunt, New Jersey.

Dr. Holton, of Vermont, offered a resolution, that a committee be appointed by the Chairman to report on Diphtheria as it has prevailed in the United States. The motion was carried, and the following committee was appointed:—Dr. H. D. Holton, Vermont; Dr. O. D. Norton, Ohio; Dr. M. Ryerson, New Jersey; Dr. J. S. B. Alleyne, Missouri.

Adjourned.

Section on Surgery.

The Section was organized by the choice of Dr. H. J. Bigelow, Massachusetts, as Chairman, and Dr. A. B. Hall, Massachusetts, as Secretary.

Dr. J. Mason Warren, of Massachusetts, read an elaborate paper on Staphyloraphy. After considerable discussion, in which several gentlemen participated, the paper was referred to the Committee on Publication.

Dr. L. A. Sayre, of New York, read a paper "on the Mechanical Treatment of Chronic Inflammation of the Joints of the Lower Extremities, with a description of some new apparatus for producing extension at the knee- and ankle-joints." The paper, after some remarks from various gentlemen, was referred to the Committee on Publication. Dr. Sayre also read the history of a "Case of Exsection of the Wrist-joint," by Dr. Tewksbury, of Portland, Me. As this paper was considered as an appendix to the Report of the Chairman of the Committee on Conservative Surgery, it was referred to the same committee.

Dr. H. D. Holton, of Putney, Vt., read a short paper on Dislocation of the Sternal End of the Clavicle, exhibiting a "new apparatus for maintaining the reduction." This paper was referred to the Committee on Publication.

A paper was presented from Dr. Lawrence Turnbull, of Philadelphia, "on Foreign Bodies in the Ear, with a condensed statement of the present condition of Aural Surgery, with a bibliography." As the author was not present, the paper was referred to the Committee on Publication, with discretionary power.

On Wednesday, the Section met at the Medical College to listen to a paper from the Chairman, with demonstrations, on fracture of the neck of the femur and impaction of the head of the bone, and dislocation of the same.

Subsequently, Dr. Sayre offered the following resolution:—

Resolved, That the thanks of this Association are due to Dr. H. J. Bigelow for his scientific demonstration of the anatomy of the hip-joint and the injuries connected therewith, and their proper treatment, and that they request Dr. Bigelow to furnish the same for publication.

The following subjects were selected to be reported upon at the next annual meeting: On Strangulated Hernia, by Dr. Peck, Iowa. On the Cause and Pathology of Pyæmia, by Dr. J. Woodward, U.S.A. On the Use of Plaster of Paris in Surgery, by Dr. James L. Little, of New York.

Adjourned.

[For the greater part of the preceding report of the doings of the general session of the American Medical Association, we are indebted to the very accurate and full report of the *Boston Daily Advertiser*.—Eds.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JUNE 15, 1865.

Sixteenth Annual Convention of the American Medical Association.—The past week has been one of much interest to the members of the medical profession here, as being the anniversary week of the American Medical Association. We have devoted a large space of this and the last number of our Journal to the proceedings incident to it, and our readers are quite as capable as ourselves of forming an opinion as to the character of the occasion. We believe we speak the feeling of all who were able to be present, that no meeting has been more successful than that just terminated. We do not propose now to enter into a discussion of any radical defects or shortcomings which prevent these annual sessions from accomplishing all that could be wished for, for the advancement of medical science or the establishment of correct views of medical ethics. Every thoughtful physician will see great room for improvement in these particulars. It is to those features in the late meeting which were the subject of general congratulation that we propose now to give our attention.

And first it is interesting to note that this meeting was the largest in point of numbers that has ever been held by the Association. This is a special cause of gratification to its friends, from the fact that there prevailed to some extent an opinion that there was a lack of interest in the meeting felt by our professional brethren here, and that from the tone of medical journals of late the profession at large were disposed to look upon the Association as a failure and as having seen its best days. However extensively such an opinion may have prevailed in anticipation, no one who was present at the meeting itself can doubt its vitality at any rate. There are peculiar circumstances connected with our National Association which give, and must always give, it a character somewhat different from other organizations of the same class. The social element—the bringing together of members of an influential class from distant parts of our common country—is to our minds a circumstance of immense importance when we undertake to estimate the good resulting from these conventions. Who shall say how much the national ties which bind together States and communities of such diverse characters and interests are strengthened by the free intercourse and kindly communings which are thus brought about? How much local prejudice may be removed by a hearty grasp of the hand or the welcome smile of a hospitable face! What erroneous impressions of local meanness or coldness to strangers may not be forever effaced by a personal experience of unlooked-for consideration or liberality!

To our minds the good results of our annual gatherings in this respect cannot be overestimated, nor outgrown. In a country so vast as ours, we need frequent occasions of bringing together representative men from all parts—the oftener the better. We cannot have too much of the antagonistic power thus generated to counteract the never-tiring influence of local self-seeking to alienate the different sections of our land. It is therefore particularly gratifying at the present time that our meeting was so large; especially when we consider that a large number of the States were not represented at all. As we said before, the importance of our meetings in this aspect is very great, and is peculiar to our American Association. It is a National Convention which binds more strongly together the brotherhood of States.

Speaking for our brethren in Massachusetts, we are free to say that we have heard no expression but that of the greatest satisfaction at the manner in which the Convention of the past week was conducted, and an increased interest in the Association which promises well for the future. The Committee of Arrangements may be congratulated for the good taste and judgment which guided them in their efforts to make the visit of our friends as agreeable as possible; and we feel assured that our guests were made more than happy thereby. The City of Boston well sustained its character for hospitality at the hands of our excellent Mayor and other municipal authorities, and we cannot look back to a single circumstance in the whole round of private or public social entertainments with any other feeling than that of pride and gratification.

One word about the business sessions of the Convention. And the first spontaneous utterance of every member of the Association present must be, that surely never was there a presiding officer at the head of a representative body more worthy of his place than our excellent president, Dr. N. S. Davis. His unhesitating readiness at every moment on every question of parliamentary rule, his unswerving and unwearied

attention to the whole proceedings, never for a single moment allowing him to lose his complete grasp of the business in hand, elicited unstinted expressions of admiration and respect from all quarters. While his unfailing courtesy and impartiality only heightened the regard for his moral qualities which his mental superiority had commanded. The general admiration of the Convention may be well summed up in the feeling that we heard more than once expressed, that "we should be willing to have Dr. Davis appointed perpetual President." He may rest assured that he takes back with him to his distant home the universal regard and respect of his associates.

This is not the place to discuss the merits of the scientific communications to the Association. Some of them were of great excellence we know, others were of little value. The former will appear in the publications of the Association, and the latter we sincerely hope will feel the influence of the discretionary power of the Committee on Publication. Exciting questions of medical ethics were discussed in general session and were left unsettled. So long as our meetings retain their present character, it seems to us, it must be a matter of years before they can be. It is a question calling for the nicest consideration by the ablest minds of our profession whether there is not a better way by which such questions may be speedily and authoritatively adjusted.

And so we take leave of our National Medical Association, in the full hope and belief that if, as the president suggested, the present year was a critical one in its history, a turning point of decadence or ascension, it has taken the direction of the latter, and has entered on a new career of usefulness and strength, promising more for the welfare of the country and humanity than it has ever before accomplished. At its next meeting we fervently hope to see represented the many States so sadly turned against us for the past four years, so that our Convention may be in reality as well as in name, a National one, which may do—who shall say how much?—to heal the bleeding wounds through which the national life has been flowing out so long.

The sixteenth annual session of the Pennsylvania State Medical Society was held at Altoona on the 14th inst.——The Illinois State Medical Society held its annual meeting at Bloomington on the 2d and 3d of May. A public address was delivered by Dr. N. S. Davis, of Chicago, on the Nature of Medical Science, and its Relations to the Community. A report on Spotted Fever, by J. S. Jewell, was read and discussed.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, JUNE 10TH, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	33	33	66
Ave. mortality of corresponding weeks for ten years, 1853—1863,	35.1	33.7	68.8
Average corrected to increased population - - - - -	00	00	76.06
Death of persons above 90 - - - - - - - - -	0	1	1

A NOTE respecting the omission of the Mass. Med. Society's dinner at the late annual meeting, a paper on Chlorodyne, with other communications and a variety of miscellaneous matter, have been excluded from our issues of this week and the last by the proceedings of our National Association, notwithstanding the use of small type and the extra sheet appended to the last number.

MARRIED,—At Dorchester, June 7th, Francis F. Brown, M.D., of Reading, to Miss Emma Mary Clapp, of D.—At Valley Falls, R. I., June 6th, Augustine A. Mann, M.D., of Central Falls, to Miss Sarah T. Bucklin, of Valley Falls.—At Framingham, A. E. Hoyt, M.D., late Surgeon 25th Mass. Vols., to Miss Emma F. Whiting, of East Medway.

DIED,—In Philadelphia, 6th May last, in the 69th year of his age, Dr. William Darrach, formerly a professor in the Pennsylvania Medical College.

DEATHS IN BOSTON for the week ending Saturday noon, June 10th, 66. Males, 33—Females, 33. Abscess, 2—accident, 4—apoplexy, 2—asthma, 2—disease of the brain, 1—consumption, 10—convulsions, 2—diphtheria, 2—dropsy of the brain, 5—drowned, 1—erysipelas, 2—scarlet fever, 1—gastritis, 1—disease of the heart, 1—homicide, 1—infantile disease, 3—intemperance, 1—disease of the liver, 1—gangrene of the lungs, 1—inflammation of the lungs, 4—marasmus, 1—paralysis, 1—puerperal disease, 3—pyæmia, 1—scrofula, 1—smallpox, 3—disease of the spine, 1—teething, 1—tumor, 1—unknown, 5.

Under 5 years of age, 24—between 5 and 20 years, 9—between 20 and 40 years, 14—between 40 and 60 years, 13—above 60 years, 6. Born in the United States, 48—Ireland, 15—other places, 3.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. LXXII. THURSDAY, JUNE 22, 1865. No. 21.

CONGENITAL TUMORS OF THE SACRAL AND PERINEAL REGIONS, CONTAINING CYSTS, FIBROUS TISSUE, CARTILAGE, BONE, AND MORE OR LESS COMPLETE FŒTAL STRUCTURES.

[Read before the Boston Society for Medical Improvement, April 24th, 1865, and communicated for the Boston Medical and Surgical Journal.]

BY CALVIN ELLIS, M.D.

A FEW days since, Dr. John Flint brought for examination a tumor, which had been attached to the perineal region of a seven months' fœtus. He also furnished the following history.

The mother was 26 years of age, and in January, 1864, gave birth to a mature though stillborn child. She afterwards enjoyed better health than for many years, and, in September, again became pregnant, but noticed nothing unusual until about the middle of March, when the abdomen enlarged very rapidly and to an uncomfortable extent. She very soon became restless, and could neither sit nor lie with ease. During the last three or four weeks she was unable to take much food or retain it, without extreme distress. Soon after the commencement of labor, a large amount of fluid escaped, which was supposed to be the liquor amnii, but the membranes were found unbroken. After their rupture, the bed was deluged with about half a pailful more of fluid. In about two hours the child was partly expelled, but as the completion of the labor was evidently prevented by some obstacle, gentle traction was used with success. It was then found that the fœtus had been separated from a large tumor, which had been attached to its sacral and perineal region, and which was afterwards removed. The mother recovered completely.

The fœtus was a female. The mass separated during birth was perhaps five inches in diameter, and had been covered partly by healthy integument, partly by a thin bluish membrane, too delicate to offer much resistance to the traction used.

The general character and consistence of the mass varied much in different parts. The superior portion was soft, and resembled

fœtal brain very closely, something like a division into convolutions even being noticed in or near the pelvis. Other parts were much firmer, glistening, and of a brownish or reddish color. There were also cysts, some of which had the appearance of being formed by the separation of the fibres of the tissue. They varied in size, from perhaps a few lines to an inch or more in diameter, though it was not easy to measure the larger ones. Their contents were of various colors—clear, dark-brown or reddish. The inner surfaces had a smooth, serous appearance.

A microscopic examination showed the following elements:—

1. Nuclei no larger and frequently smaller than blood globules, either containing granular matter or small nucleoli. Some of these were surrounded by cell-walls. They were most abundant in the brain-like portions.

2. Fibrous tissue, varying in amount in different parts, according to their consistence, and apparently absent in those which most closely resembled fœtal brain.

3. Fusiform cells, with small, elongated nuclei and small nucleoli.

4. Hyaline cartilage, in the form of minute circumscribed points, surrounded by fibrous tissue or elongated nuclei; or in large, irregular fragments, perhaps attached to

5. Bone, described by Dr. Wyman in his report, which follows.

6. A little striped muscular fibre, the situation of which in the deeper-seated portion of the tumor, rendered it probable that it belonged to the latter, and had not been merely removed from the perineal region during the enlargement of the mass.

7. A few lobules, like those found in glandular growths, but filled with minute globules and granules, as in fatty degeneration.

8. Calcareous matter, in limited portions only, in small particles, detected by the touch.

9. Fat, in points or lines, as in fatty degeneration.

The seat of the growth, and its microscopic characters, were the same as those in specimens shown at meetings of the Society, and published in the *Transactions* of Nov. 12th, 1860. Their peculiarities attracted much attention at that time, and were supposed by the writer to indicate something different from ordinary growths. After the examination of the last specimen, it seemed clear that they all belonged to a class of new formations not previously noticed in this country, though recognized and described in Virchow's *Archiv. fur Pathologische Anatomie*, Vol. XIII., in two articles, one entitled *Congenital Cystic Hygroma of the Sacral Region;* the other, *Congenital Perineal Cystic Hygroma, with Fœtus in Fœtu.*

As it was important that the facts should be fully substantiated, the specimen was submitted to Prof. Jeffries Wyman, who made the following report:—

"The tumor entered the cavity of the pelvis, but had no connection with either of the pelvic viscera. It adhered to the anterior face of

the sacrum, and by its pressure had turned the coccyx and lower end of the sacrum upwards and backwards. A curved probe passed into the spinal canal escaped readily through the third anterior sacral foramen of the left side, and entered for a short distance into the tumor. The sciatic nerves did not enter the tumor.

"The tegumentary covering was lined by a serous sac. Portions of the tumor had the consistence, vascularity, color and general appearance of fœtal brain. This brain-like substance consisted chiefly of minute granules and spherical bodies (nuclei) filled with granules. In some instances these bodies were surrounded by a cell-wall of from two to three times their diameter. Some portions appeared destitute of fibres; others contained a few very fine ones. The rest of the tumor was composed of connective tissue and some solid fatty matter.

"In one portion, and near the surface, were found several pieces of cartilage, some of them partially ossified, and some pieces of bone of irregular shape, and in their structure closely resembling bones of the fœtal cranium, though none of them had a form which rendered it possible to identify them.

"A specimen, not unlike the above, is described by Vrolik. *Tabulæ Embryogenesin. Hominis et Mammalium*, Tab. C. In this instance the tumor contained pieces of cartilage, muscular fibres (a few only) and pieces of bone. In the same work another case is mentioned and figured, described by Himly.

"The one described by Vrolik was regarded by him as an instance of *fœtus in fœtu*, and is referred to in the article by Luschka in Virchow's *Archives*."

The character of the case being sufficiently clear, it may be interesting to compare it with the others observed here. As copies of the *Transactions of the Boston Society for Medical Improvement* are in the possession of a comparatively small number of persons, it seems best to re-publish the first case, and add some facts in regard to the second, which was only alluded to at the time.

Case I.—Dr. Gay showed a fœtus, bearing a large tumor on the nates and lower part of the back. It was of a soft-solid consistence, covered with veins, and looked like encephaloid. After the fourth month of pregnancy the mother experienced a great increase of size, with pain and general uneasiness, and had a feeling as if labor were approaching. She went on, however, until the sixth month, when regular labor pains came on. The head presented, and, the membranes being ruptured, a gallon of liquor amnii was discharged. After the head and shoulders were born there was considerable delay, as if the body were retained by something behind. Several severe pains followed, and, at length, the whole was expelled, when it was found that the obstruction had been caused by the tumor, which was three times the size of the head.

Dr. Ellis said the tumor was found, by the microscope, to contain delicate cellular or fibrous tissue, and an abundance of small, granular nuclei, with small, indistinct nucleoli, such as we sometimes see in disease which is clinically malignant, but which are not characteristic of cancer. In some respects, the growth resembled a speci-

men which he exhibited several weeks since to the Society, but which also contained osseous formations. The present tumor contained no bone, but there were cartilaginous-looking points and a multitude of cysts.

Case II.—This was referred to in a general way only at the time, as it was necessary to macerate it before the character of the bones could be ascertained. As the latter were, however, unfortunately, lost, a statement of the other peculiarities only can be made. Dr. Dupee reports that the mother was 30 years of age, and was delivered, after a hard labor, of this, her first child. It was a female, seventeen inches long from vertex to heel, large, well formed, and at the full period. The external organs were well developed, the anus being seen just below the lower edge of the vulva. Between this point and the posterior inferior spinous process of the ilium, was attached a tumor upwards of five inches in diameter, in which the muscles of the gluteal region and thigh were lost. The sacrum was pushed up somewhat. Posteriorly it was of a purplish or dark-red color. It was in some parts soft and fluctuating, as if it contained cerebral substance, and in others more firm and fleshy, while here and there irregular bones were distinctly felt. There was also a cyst containing hair, a little sebaceous matter, and bones.

We will now give a brief account of the cases reported in Virchow's *Archiv.*, Vol. XIII., previously alluded to. In the first article, on page 187, by Dr. J. A. Gläser, of Hamburg, *cystic* formations only are described, but it will probably be admitted that their introduction is appropriate here, when a general view of the subject is taken at the close. In 1843, fourteen similar cases, some of them of a questionable character, were reported by Dr. A. Wernher, of Giessen. Afterwards the subject received little or no attention until the appearance of the above article, in which six new cases are communicated—one by the author, two by Dr. Keller, of Philadelphia, and three others published by different observers in 1852, 1853 and 1854. The cysts described by both Wernher and Gläser differ somewhat in their details, but resemble each other sufficiently to be included under the same head. A number of observers have alluded to the great variety in the contents of the cysts, independently of teeth, hair, &c., the latter having been regarded as perhaps belonging to other formations, though without reason, as we hope to show. These contents have been described as either clear, bloody, tea- or chocolate-colored, the variations not being dependent upon the age of the cysts, but upon some original difference. In two of these cases the cysts were embedded in common stroma; in two others there was a single cyst, and, in the remaining two, cysts with connective tissue.

In regard to the external appearances, one was covered with hair; in three the veins were strongly developed; in two there were excoriations; in two, gangrenous spots, and in two a second cyst could be

felt through the walls of the larger. The largest cyst extended to the knee, and two of them as high up as the last lumbar vertebra. This latter fact is important in connection with the diagnosis of spina bifida. In five of these six cases the spinal canal was certainly closed, and it was probably so in the other, but an examination was not made to determine this point. In the last, the tumor at birth was as large as a hen's egg, and increased in size until its removal by ligature when the child was two years old. It was then regarded as a case of recovery after an operation for spina bifida. The other five children lived respectively six hours, three days, two months, four months, and two years three months. Death in all was caused by the tumor—twice after surgical interference, in the other cases by inflammatory processes.

In the same volume, page 411, a remarkable case is reported by Prof. H. Luschka, of Tübingen, which presents some additional and remarkable features. It is entitled *Congenital Perineal Cystic Hygroma, with Fœtus in Fœtu.*

A woman, who had previously given birth to healthy children, was delivered, after a difficult labor, at the full period, of a boy, to whose perineal region was attached a large lobulated tumor, from which a second was hanging by a long, slender pedicle. The first, originating in the true pelvis, reached the heel, and was covered by a pale-red, and, in part, extremely thin skin. It enclosed cysts of various sizes, the two principal ones containing a large amount of clear fluid, mostly water, with some albumen and salts. There were also congeries of small cysts, so arranged as to give the tissue the appearance of colloid disease of the thyroid gland. Epithelium was found in some. The contents varied, being either thin, watery serum; a more consistent, tenacious, clear fluid, like the albumen of an egg; or a clear gelatinous material, with whitish, flocculent filaments. These filaments were found, under the microscope, to contain groups of cells. Some of the larger cysts were filled with a syrup-like, brownish-red, thick matter, in which there were normal or shrunken blood-corpuscles, fat and pigment-molecules. In others there was a whitish deposit, composed of amorphous calcareous salts and crystals of ammonio-magnesian phosphates.

In addition to the cysts there were *nodules* of various sizes; but no larger than a hazel nut, soft, grayish-red, and resembling in color and consistence *the cerebral substance of new-born children.* In this material the cysts appeared to form. It had a granular character, and contained roundish nuclei, with nucleoli and nucleated fusiform cells. There were also circumscribed groups of round cells.

The other smaller tumor, attached by a long pedicle, was covered with skin. The pedicle contained a venous and arterial trunk, through which an injection was introduced.

An incision through the skin and a considerable thickness of œdematous adipose subcutaneous tissue, opened a cavity, reached with

some difficulty, owing to the presence of a *cartilaginous and bony mass* embedded in the adipose tissue. This was somewhat pyramidal and curved like the sacrum, composed of cartilage on the periphery and of spongy bone in the centre. Attached to this by fibrous tissue was a small, elongated portion of *cartilage* and a little *striped muscular fibre.* The cavity contained various *viscera,* surrounded and held together by a very thin membrane-like peritoneum. There was also a portion of *intestinal canal,* with the proper coats, attached to a kind of mesentery, with bloodvessels between its layers. Several other small bodies suggested, indefinitely, testicles, kidneys or liver.

The writer remarks upon the combination of cysts, with the *fœtus in fœtu,* but is reserved in expressing an opinion in regard to the relation of the two. He adds, however, that there can be no doubt "that this cystic tumor presented all the essential characters of a congenital cystic hygroma, as noticed by other observers, in the neck and axilla, as well as the perinæum, without the presence of fœtal structures," and reminds us of Wernher's remark, that "there are manifest transitions from the simple and compound cysts to those containing fœtal structures and the most complete cases of *fœtus in fœtu.*"

It seems now, that with the aid of the peculiar formations noticed in this city, we may construct a series with considerable accuracy. In this, the simple cystic growths should hold the lowest place. As a connecting link between them and the more complicated structures, we have our three cases, in which, with cysts, was found the variety of tissues described, the bones mentioned by Dr. Wyman suggesting the idea of an attempt at the production of more complete forms, although such could not be designated. The case in which these were found is of great value, as it gives what Luschka's lacks—the actual combination, in the same mass, of all the structures which occupied the two tumors described by him. In the larger were cysts, brain-like material and cells; in the smaller, fœtal structures. The completeness of the latter cannot allow even the most skeptical to be in doubt in regard to their nature.

Having reached, therefore, the *fœtus in fœtu,* we may follow the series through recorded cases to the complete additional human being. Dr. August Förster, of Wurzburg, in a work entitled "Die Missbildungen des Menschen," figures a number of these. In Plate V., Figs. 9 and 10, is represented a girl, 10 years of age, with a large tumor of the nates, to which is attached a femur, two lower legs fused, and two feet, one with six toes, the other rudimentary with two toes. No description of the tumor is given. In Figs. 13 and 14, the pelvis and two lower extremities project from the perineal region of a fœtus.

In Plate II., Fig. 1, are two well-formed fœtuses attached at the perineal region. And in Fig. 11 are shown the Hungarian sisters, who died when about 22 years of age. There was a common coc-

cyx, rectum and anus. The labia majora of the two were united in the middle.

In the last three cases there was no tumor, and they may belong to another class, but it does not seem inappropriate to introduce them as illustrations of what all the others at least show—the existence of a formative power in nature, which at times is manifested in the development, in the perineal region, of various elementary tissues, or that more complex combination of them which finally culminates in the formation of a new being.

This view of the subject alone surrounds it with great interest, but the knowledge of the character of the tumors just described is of great practical importance, inasmuch as they are likely to be confounded with spina bifida and malignant growths.

MUSCULAR RHEUMATISM.

[Read before the Boston Society for Medical Observation, and communicated for the Boston Medical and Surgical Journal.]

By John P. Reynolds, M.D.

Two years ago, M. Beau, physician to La Charité, contributed to the December number of the *Archives Générales*, the leading article, entitled "Rheumatism of the Deltoid Muscle, together with certain considerations upon Muscular Rheumatism and Contraction."

I have frequently wished to call the attention of others to this article, which did not, I think, at the time attract with us much notice, and more especially to the views therein expressed in regard to certain points in the pathology and treatment of wry-neck.

The deltoid muscle, and the other muscles which are the more ordinary seats of muscular rheumatism, present the anatomical peculiarity of a close union with the superjacent skin by means of a thin and remarkably firm cellular tissue, so that the muscle and the skin above it may be said to constitute a single mass. To remove the integument from the deltoid much patience is required, while a few touches of the scalpel are enough to separate the skin from the neighboring muscles. A similar relation exists between the skin and the tendinous aponeurosis at the small of the back; and there is the same close connection between the upper part of the trapezius and the integument of the neck.

This anatomical fact explains, then, the ease with which rheumatic symptoms are set up in these muscles, when, in an individual sufficiently predisposed, the skin investing them is first bedewed with copious perspiration, and then, either consciously, or unconsciously as during sleep, exposed to a sudden chill.

An attack of muscular rheumatism varies in intensity from that mildest form in which the pain accompanying the efforts of the affected muscle and its moderate tenderness on pressure are the only

symptoms, to the class of cases in which the slightest movements even of remote parts of the body provoke cries of agonizing suffering, and where even the lightest touch upon the diseased part cannot be endured; while even when in perfect rest the affected muscle is the seat of paroxysms of throbbing and lancinating pain.

In this latter form, an effort is made to protect the patient from his distress, which in certain cases may mislead the observer as to the precise seat of the disease. We all know how in inflammations involving the psoas muscle, the various flexors of the thigh are put in action to preserve the psoas from the slightest motion; how also the masseters, in inflammation of the throat, often rigidly close the jaws, to prevent all movement of the suffering part. It may be added that, though in attacks of muscular rheumatism the parts engaged in this work of protection are free from the extreme pain which is found at the seat of the disease, they experience after a time the sense of aching and fatigue which accompanies prolonged contraction.

In a severe attack, affecting the deltoid, the arm is held applied to the chest, and is immovably fixed in this position by the rigid contraction of the muscles constituting the anterior and posterior margins of the axilla. So marked is this action as to cause, in some cases, slight tumefaction and the sense of formication in the hand from the disturbed circulation and innervation of the part. If, again, the muscular masses at the small of the back be the part attacked, and only one side be affected, the quadratus lumborum, the levatores costarum and other muscles bend the vertebral column towards the painful side, to free the suffering muscle from all risk of tension; or if the two sacro-lumbales are in trouble, the whole spine is bent backwards by its other extensors with the same purpose. In wry-neck, which is often loosely described as a rheumatism of the cervical muscles, the true disease exists in the trapezius, which is attacked sometimes in one region—it may be the right or it may be the left—and sometimes throughout its whole extent. In this instance the protective office devolves, when the disease is limited to one side, upon the sterno-cleido-mastoid, the scalenus, and others, which are placed in a state of rigid contraction and incline the head at the painful side, to a greater or less extent according to the severity of the attack. Suppose, now, that both sides of the trapezius are affected, the deep extensors of the posterior cervical region assume the protective office, and the trapezius is kept in quiet, not by an inclination of the head on one side, but by its being carried directly back; though in this case the protection afforded is less perfect, than that given when there is a lateral inclination.

Not only, then, is it easy when rheumatism attacks the trapezius to decide by the eye alone, and that at a distance, what part of the muscle is in trouble, but there is a very simple manœuvre which will indicate the seat of the disease, and will prove it to exist, as above stated, only in the trapezius.

Try, in a case of lateral inclination, to destroy the obliquity, and to replace the head in its ordinary position, and violent pain is excited, not in the contracted muscles, but entirely and only in the lateral and limited portion of the rheumatic trapezius, which your attempt puts in painful extension. Press, now, the head in the opposite direction in which it is already inclined, you will cause absolutely no pain in the trapezius, and the effort made will even give temporary relief to the protecting muscles, by relaxing their contraction. If the head be bent backwards, a similar manœuvre will produce corresponding results.

The paper, of which I have thus presented, as I hope, the more important points, is a model of medical writing, and well worthy of careful examination. It is illustrated, as regards rheumatism of the deltoid, by several carefully reported cases, and contains interesting statements as to the frequency of the disease as observed by the author.

It is quite possible that the views thus presented are open to grave criticism; they appear to me, in relation to the parts concerned in wry-neck, at least novel, and I have thought them worthy of being brought before the Society.

My own experience of the results of counter-irritation, fomentations, &c., addressed to the region of the sterno-cleido-mastoid, has been so very unsatisfactory, that I am disposed to hail any information which explains the constant failure of such treatment.

Bibliographical Notices.

A Treatise on Military Surgery and Hygiene. By Frank Hastings Hamilton, M.D., late Lieut.-Col., Medical Inspector, U.S.A., Professor of Military Surgery, &c., Bellevue Medical College, &c. &c. Illustrated with 127 Engravings. New York: Baillière Bros., 520 Broadway. 1865. Pp. 648.

The need, on the part of those entering the volunteer medical service at the commencement of the late war, of a text-book of Military Surgery, was rendered apparent at that time by an eruption of brief compendiums intended to supply the acknowledged want. Such were the manuals of Drs. Gross, Tripler, Blackman, Hamilton, the re-printed essay of Mr. Longmore, and the special monographs of the Sanitary Commission. The works of Scrive, Baudens, Legouest, or the Blue Book of the British Government were inaccessible, in press, or untranslated, and even now the Italian Campaign and the Crimean War are but just sending forth the digested results of their experience, the elaborate work of M. Chénu having hardly yet reached this side of the Atlantic.

The four years of war now brought to their happy termination, characterized by casualties in such terrible numbers, have furnished a school of military surgery, medicine and hygiene heretofore unequal-

led, and the character of our brave soldiers has been such that civil physicians have been brought within the influences of its instruction as well as those immediately connected with the troops. No village in the land is so small that its "Doctor" cannot claim experience acquired by the care of soldiers, veterans in wounds as well as war, furloughed again and again back to their homes, to await the slow separation of a sequestrum, the consolidation of a fractured bone, the granulation of an extensive flesh-wound or amputation, or to gather strength in the atmosphere of their native hills and valleys from the wasting of malarial fever or the starving torments of a rebel prison. With so general a spread of military medical knowledge it would be strange if those most favorably situated were not authors and compilers from the experience and data of the battle-field and the general hospital. No nation ever had or saw such military hospitals, and no nation knows so much of military medical science as our own at this present moment.

As a foretaste of what we have a right to expect during the next decade, Dr. Hamilton, availing himself of an experience, first as Brigade Surgeon, later as Medical Inspector, has seized the opportunity to perfect his early compilation of military surgery, from personal observation, the gathered reports of journals, &c., and now presents us with a volume of 650 pages, covering very completely, and generally with sufficient elaboration, the various topics properly coming within the limits of such a treatise. It is characterized by great numbers of illustrative cases, the author rightly preferring to let recorded observations set forth the subject-matter rather than to fill up his chapter with a more didactic discussion of details. The homely names of our own battle-fields contrast strangely with the sonorous titles which we read in Hennen, Guthrie, or Larrey. They bring back to most readers melancholy reminiscences of sick soldiers crowded in abandoned rebel huts, long wagon-trains of fevered patients on the Peninsula, and the hospital transport steamers of the York and James rivers, only to impress them, however, with the immense strides of improvement in the care of disabled men between the early and the closing days of the rebellion.

We can but express in general terms our admiration of Dr. Hamilton's work—our confident opinion that it is the best on the subject which any language possesses, and that it is entitled to be considered of greater authority than any of its predecessors. "The Examination of Recruits," "Hospitals," "Fractures of the Thigh," "Excisions," "Wounds of the Thorax," "Hospital Gangrene," "Scurvy," subjects of a few of its twenty-six chapters, are presented by the light of observation derived from vast numbers of cases. The discussion of the "Necessities and Requirements for the immediate succor of the Wounded," and the general "Hygiene of Troops," has acquired preciseness of detail only to be obtained from experience in campaigns covering an immense territory, at previously unheard-of distances from bases and characterized by the most sanguinary conflicts. The medical and surgical statistics which the war has furnished, when the records of the Surgeon-General's office are published, will, by the magnitude of their numbers, appal those who have not seen them.

The necessity for a chapter of thirty-five pages on "Arrow

Wounds" must startle European readers, just as a thousand other divergencies from the canons of written military law have reminded them that we have fought over a country unlike theirs, with experiences without precedent and vicissitudes never before encountered.

Throughout the work, this, and the subjects discussed in each chapter, are treated faithfully and honestly, with evident intention on the author's part to make his pages a reliable guide, to give the simplest explanations, and to set forth the best course to be pursued by the Army Surgeon, rather than to display his own erudition or boast of his personal surgical feats. Those who are familiar with his treatise on Dislocations and Fractures will find the same careful and thorough style which characterized that work preserved in this later and no less practical or modest production of Dr. Hamilton's pen.

The familiarity of our readers with military surgery, which we have previously alluded to, renders it almost unnecessary to give an analysis of the book before us; few do not know the merits of the question of rank, and the evils attaching to the non-combatant position of the medical officer, which Chapter I. treats of in detail; no one is inexperienced in the examination of recruits, the subject of Chapter II., although not every enrolment surgeon, perhaps, would reflect that a recruit may have too large feet. At Gallatin, Tenn., there was a soldier whose feet were so large that the quartermaster could not furnish him with shoes. He was walking with bare feet, and had been in this condition eight months. His number was thirteen, while the government supplies no larger shoes than eleven. Diet, Camp Police, Dress, Exercise, Vaccination and Hospital Architecture, are household words to those who have read the documents of, or who have served with, the Sanitary Commission, and there are few who have not. Stretchers, ambulances and hospital cars and the handling of wounded men have been sadly studied by a people, hardly one of whom has not had to make those melancholy and often-repeated journeys from the front with a son, brother, friend or patient. We know that a man's brains may be almost shot away, and the man live; that patients do get well, when a bullet has traversed the lungs, oftener than was once believed, and that this is in spite of, rather than because, Dr. Howard's "sealing method" has been used, which, unfortunately, succeeds only in those cases where the wound is external to the thoracic cavity. How invaluable cold water is as a dressing has been learned by every private in the ranks, who thinks his "civil" doctor an ignoramus if he proposes any substitute for it. Most of us are fast becoming aware that, of late especially, too great a conservatism in operating has been practised, and that many a poor fellow would now be alive had his thigh been soon enough amputated for the compound fracture which killed him. Just where this conservatism is to begin and where to end Dr. Hamilton thinks is not yet established, and not even the wonderful success in treating fractured thighs which the Government Records reveal will, we fear, be conclusive in the matter. Secondary hæmorrhage, necrosis, hospital gangrene, are not the exclusive experience of hospital surgeons in large cities, and almost every man in the land can talk familiarly about excisions and amputations. The five or six soldiers now alive after losing the head of the femur, the three or four who walk about without any knee-joint, the hundreds whose arms are useful after excision of the head of the hume-

rus, and the hundreds of others with arms almost an encumbrance because they have lost their elbow-joints (this last operation being much less frequently performed now than at an earlier period of the war), illustrate the success of modern improvements in surgery in a manner comprehended by unprofessional as well as professional observers.

But because we have become *au fait* with the knife and undismayed by bleeding arteries, we must not cease to remember in peaceful practice how little of the surgery of civil life requires mere boldness to operate. When a patient has got a diseased knee-joint or a tumor in his neck, and the neighboring doctor is an "old army surgeon" who has seen hundreds of capital operations, and performed them too, till legs and arms lay outside of his tent, piled up like cord-wood, neither are to forget that judgment and diagnosis are more than a cool and steady hand, and that for experience in the practice of civil surgery the army has not been the school; ability to operate skilfully is but one step towards the successful treatment of surgical ailments.

We have alluded in this cursory way to some of the principal features of Dr. Hamilton's work, to show how excellent it must be to find favor with the competent critics into whose hands it will fall. In Great Britain it will be eagerly sought by large numbers of readers to whom the author is already favorably known by reputation, and who will greedily seize upon information gathered from a war, the magnitude and perfectness of which in military details they have never been able to appreciate, and are only now beginning to think may have in some respects an important bearing upon their future interests.

In the midst of so much to praise it is a matter of regret that, before concluding this notice, we are obliged to warn our readers they are not to accept the author's chapter on Anæsthetics as anything but the expression of an individual and biased personal opinion. Dr. Hamilton's views on this subject are too peculiar and too imperfectly supported by evidence to call for refutation, especially in view of the general dissent from them shown by the daily practice of both military and civil surgeons wherever the inhalation of anæsthetics is familiar. We quote his "conclusions," which require no comment in this community, where the use of sulphuric ether, to which Dr. H. lends a qualified but more confident approval than to chloroform, renders us indifferent to the cautions with which those ignorant of its use may deem it necessary to surround directions for the employment of anæsthetics.

"Anæsthetics produce certain effects upon the system which tend to prevent union by first intention, and consequently they must be regarded as, indirectly, causes of suppuration, pyæmia, secondary hæmorrhage, erysipelas and hospital gangrene.

"Ether ought generally to be preferred to chloroform as being less likely to destroy life immediately; but no anæsthetic ought to be employed when the system is greatly prostrated by disease, or by the shock of a recent injury, or by loss of blood, unless the patient exhibits an unconquerable dread of the operation, or the operation is likely to prove exceedingly painful."

In no single detail does either of these conclusions accord, so far as we are aware, with the experience or observation of any physician

or surgeon in this city, to say the least; they are, on the contrary, diametrically opposite. The candor with which the author expresses himself ready to revise his opinions by the light of experience, suggests to us the inference that, up to the present time, this must, from some cause, have been extremely limited; and it will, we are sure, before long, bring him to the realization that sulphuric ether is an agent in the use of which there need be no misgiving as to the result, near or remote, in any respect whatever, in any operation or under any circumstances in which its administration is suggested.

It is due to the publishers to state that this book is presented to the reader well printed and handsomely bound, and adorned with illustrations which, when made from original drawings, are generally excellent, but when copied from other publications, very unsatisfactory.

Medical Lexicon. A Dictionary of Medical Science, &c., with the Accentuation and Etymology of the Terms, and the French and other Synonymes; so as to constitute a French as well as English Medical Lexicon. By Robley Dunglison, M.D., LL.D., Professor of the Institutes of Medicine in the Jefferson Medical College, Philadelphia. Thoroughly revised and very greatly modified and augmented. Philadelphia: Blanchard & Lea. 1865.

Of this truly admirable work the present edition is a great improvement upon its predecessors. The author tells us that he has expended more time and labor on this than on any former revision. The result is seen in the addition of between sixty and seventy pages of new matter in the present edition, and this notwithstanding the page has been enlarged. We can sincerely commend Dr. Dunglison's work as most thorough, scientific and accurate. We have tested it by searching its pages for new terms, which have abounded so much of late in medical nomenclature, and our search has been successful in every instance. We have been particularly struck with the fulness of the synonymy and the accuracy of the derivation of words. It is as necessary a work to every enlightened physician as Worcester's English Dictionary is to every one who would keep up his knowledge of the English tongue to the standard of the present day. It is, to our mind, the most complete work of the kind with which we are acquainted.

The Army Surgeon's Manual, for the use of Medical Officers, Cadets, Chaplains, and Hospital Stewards; containing the Regulations of the Medical Department, all General Orders from the War Department, and Circulars from the Surgeon-General's Office, from January 1st, 1861, to July 1st, 1864. By William Grace, of Washington, D. C. Published by permission of the Surgeon-General. New York: Baillière Brothers. 12mo. Pp. 200.

This instructive little volume contains, besides the Regulations and General Orders indicated in the title above, a complete list of the Medical Staff of the United States Army at the time of publication, together with all the appointments, promotions, casualties, &c., which had taken place in that branch of the service during the three years

and a half previous. It is a very valuable manual, giving information which the reader would have great difficulty in obtaining from any other source.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JUNE 22, 1865.

Swimming Schools and Public Baths.—Each year, as the summer heats come on and city homes are deserted by all who can escape to the mountains or seashore, it occurs to some overworked daily editor, sweltering in his attic sanctum and longing for a single chestful of ocean air and a dip in its refreshing waters, that there is a large class of his fellow mortals, harder worked than himself, and without even the memory or anticipation of a vacation to help them through the stifling dogday season in their crowded rooms. He writes his annual plea for the comfort and cleanliness of the laboring classes, points to the clear, cool tides which the Atlantic pours around us from its depths twice every day, demonstrates how culpably we are neglecting the use of so important a sanitary agent, and urges the necessity of the establishment of free public baths. Our wealthy citizens, enjoying the luxuries of their domestic bathing arrangements, think the article well written and worthy of attention, the municipal authorities appoint a committee to consider the expediency of carrying out the measures advocated, and there the matter always ends. The city spends money freely for the intellect of its people on its public schools and library, builds for their æsthetic cultivation splendid structures, cares for them when sick in costly hospitals, and keeps its streets clean and sweet at a great expense, but it does almost nothing for the bodily comfort and cleanliness of its laboring population.

It may be said in reply, that it has done much in placing within the reach of all an abundant supply of pure water at a very cheap rate. But water thus supplied, although amply sufficient for drinking, cooking and clothes-washing, is not and cannot be used by them for the equally important purposes of personal cleanliness. A gentleman or lady, when in the country, are able to make the morning pail of water do the same duty as the unlimited supply with which their city houses are furnished, but this is impossible in the single and crowded rooms of the former, and moreover the poor and middle classes require to be educated by public encouragement up to the necessity of personal cleanliness. This can only be done by the establishment of large public baths in proximity to the densely populated portions of the city, and the laboring man will then soon find that a plunge beneath their invigorating waters, when his day's work is over, will take from him his feeling of discomfort and fatigue and give him a night of undisturbed sleep.

We feel that it would be superfluous to say a word here upon the importance of preserving a clean and healthy skin, but do we sufficiently impress its necessity upon the uninformed public? If a pa-

tient came to us and told us that he had fallen into a tank containing an acid solution of the chlorides of sodium and potassium, sulphate of soda, phosphate of lime, acetate of potash, and lactic and butyric acids, and that his clothes were saturated with it, we should certainly advise, first of all, a bath and a change of clothing. Yet two or three drachms of these substances are deposited by evaporation upon the surface of the skin of every laboring man and woman during a summer's day, and if allowed to accumulate from week to week undergo, of necessity, partial decomposition, and render them more offensive than we like to mention.

With the old Greeks and Romans public baths were as much a part of their civilization as their temples, and in most of the large cities of Europe free or cheap baths for the populace are everywhere to be seen, and swimming schools and elegant bathing establishments for both sexes are among the most fashionable places of resort. With us, were it not for the hotels, a stranger would hardly know where to wash himself, and there is scarcely a decent bathing house in the city for the thousands of young men and women who are without private accommodations of this kind. Certainly it is the duty of our profession to take some step to remedy this evil, and we believe that the city would do everything necessary, if the importance of the measure were properly represented to them.

Messrs. Editors,—I leave it to your judgment whether the subject of the following article is entitled to a place in the pages of your Journal. If you are not familiar with the imposition, I would state that the price of a half-ounce vial of the nostrum in New York is two dollars. I should not have taken the trouble to examine the article but for the representations of some metropolitan patients, which led me to believe that respectable physicians would use or tolerate it as they do McMunn's elixir, and remedies of that description. E.

Chlorodyne.—The use of an English nostrum with this name, it is alleged, is sanctioned by many respectable physicians; and patients who have tried it believe that it possesses some advantages over other anodynes. This has led to speculations in regard to its composition. Two published formulæ, one of which appeared in the Journal, agree in giving as its ingredients, morphia, hydrocyanic acid, chloroform, oil of peppermint and molasses. One contains, also, perchloric acid, tincture of hemp and oleoresin of capsicum. The other has sulphuric ether and gum-water. These formulæ would not afford a satisfactory imitation of the nostrum. There is not the slightest flavor of hydrocyanic acid or of peppermint in the "genuine" preparation of "Dr. J. Collis Browne." It does not contain a strong acid: chloroform separates from it when at rest, and directions are given to "shake the bottle previous to use." Sulphuric ether is also present: and the effects of ordinary and over-doses point conclusively to morphia as its basis. Gum is precipitated by alcohol, and molasses forms a part of its constituent. From the impression that it contained cannabis, I have made chlorodyne with carefully-prepared and concentrated tinctures of the herb, as well as of the resin or extract, but have become satisfied that there is nothing of the kind in the nostrum. A quantity of chlorodyne containing one sixtieth of a grain of the extract, mixed

with water and sulphuric ether, will impart its characteristic green tint to the latter. In a similar experiment with the nostrum, the ether remains entirely colorless. The conclusion, therefore, is, that morphia, chloroform and sulphuric ether are the only ingredients of this fashionable and costly remedy.

A close imitation of the nostrum may be made from these data according to the following formula :—

Heat molasses in a water bath, and remove the scum until it becomes clear. Mix one part of officinal mucilage of acacia with two parts of molasses, to form the constituent. Dissolve eight grains sulphate of morphia in one drachm and a half of water by heat, and add eight grains extract of liquorice. To this solution add one fluid-drachm of pure sulphuric ether. Add a portion of the constituent and two fluid-drachms of chloroform, and shake the mixture; then add enough of the constituent to make a fluidounce. The liquorice not only gives color and smoothness to the mixture, but is necessary to retain the articles in combination. The color and density of chlorodyne may be made to agree exactly with the nostrum. Two drops should correspond to one minim. According to the density of the constituent, the quantity of water used for the morphia should be more or less. The dose of chlorodyne is from ten to thirty minims, or twice the number of drops. Twenty drops contain one sixth of a grain of morphia, two minims and a half, or ten drops of chloroform, and half the quantity of sulphuric ether.

Dr. Davis's Address.—Every body must read Dr. Davis's Address to the American Medical Association with pleasure. President Davis is a man of *ideas*, not of *one*. He is a traveller over a wide region, and if it be a barren one, he shows he is a man to see why it is so, and how it may be made a productive one. He sees where the screw is loose, and gently, and so strongly, shows how it may be adjusted. His views are wide and wise, strong and simple—just such as are wanted—just such as are the the surest to accomplish their object. President Davis is a generalizer who fully understands what is the particular—a logician, one who sees the principle in the detail, and makes it welcome to him, and to all to whom he addresses himself. He inflicts no wounds, and if he find them, he has the art and science to heal them—a wise *medicus*. C.

Massachusetts Dental Society.—At the annual meeting of the Mass. Dental Society held in Boston, May 18th, the following named gentlemen were chosen officers for the ensuing year, viz. :—

N. C. Keep, M.D., *President;* E. G. Leach, *Vice President;* T. H. Chandler, *Recording Secretary;* E. C. Rolfe, M.D., *Corresponding Secretary;* S. J. McDougall, M.D., *Treasurer;* E. N. Harris, D.D.S., *Librarian;* A. Lawrence, M.D., J. T. Codman, H. F. Bishop, D.D.S., J. B. Hitchcock, M.D., S. F. Ham, M.D., *Executive Committee.*

The Charter of incorporation granted by the last Legislature was accepted; and the following preamble and resolutions unanimously adopted :—

Whereas, in the opinion of the Massachusetts Dental Society, not less than two years' pupilage in the office of a competent dentist, and attendance upon two full

courses of lectures in a Dental College, will qualify an individul to practise dentistry, therefore

Resolved, That practitioners of dentistry be requested not to receive into their offices students for a less term than two years, and under no consideration unless they agree to attend lectures in, and be graduated from, a Dental College, before entering upon the practice of the profession.

Resolved, That it is the duty as well as the interest of the people to require of all who hereafter enter upon the practice of dentistry that they shall have received, in course, a diploma of graduation from a Dental College as the first requisite for public confidence and patronage.

Resolved, That these resolutions be published.

THOMAS H. CHANDLER, *Secretary.*

MESSRS. EDITORS,—In your notice of the annual meeting of the Massachusetts Medical Society, you allude to the omission of the dinner as a "great mistake," and "hope that such a mistake may never be committed again." It should rather have been termed an *unfortunate necessity*, inasmuch as want of means compelled it. Every one was aware of the importance of the dinner; and the deficit might, and would have been supplied by private liberality at any other time; but the large contributions necessary to meet the coming of the American Medical Association, on the following week, forbade it this year. During the war, the cost of publications, the cost of a dinner, and other incidental expenses have doubled, while the annual assessment has remained the same, and the income from it has been much diminished by the absence of so many members in the field. No one would wish the publications to be stopped, and the only alternative was to dispense with the dinner or get into debt again, just as we were being extricated from a debt which has crippled us for so many years, and which the Committee of Arrangements doubtless thought would be as great a "mistake" as to omit the dinner; and so did the

TREASURER.

DIED, at Washington, D. C., on the 11th inst., William Whelan, M.D., aged 56 years.

Dr. Whelan had been for many years at the head of the Naval Bureau of Medicine and Surgery, and had discharged its duties with great ability and unwearied industry. He was an accomplished scholar, a courteous gentleman, and devoted his talents and energies to the service of the Government from an early period of life. He met with a rail-road accident several years ago, and has always since had to contend with pain and debility. But he did not allow physical infirmity to interfere with the discharge of his duties, and labored faithfully during the trying scenes and exigencies of the war, and now at the return of peace he is called to his rest. The loss will be felt, and his merits should be acknowledged by the country and the profession: and as we realize the blessings of peace we should cherish the memory of all who spared not themselves, but labored at the risk and cost of their lives to bring the war to a successful termination. S.

THE following remarks of Dr. Marsden should have been inserted in the report of the third day's proceedings of the American Medical Association, in our last number:—

At the conclusion of the reading of the minutes by Dr. Atkinson, the Secretary, Dr. Marsden, of Quebec, the President of the College of Physicians and Surgeons of Lower Canada, arose and said:—

Mr. President,—May I be permitted to make a few brief remarks in explanation of what I said on the first day of this session in returning thanks for the honor done me in introducing me to the meeting. I am rejoiced that I did not leave this city yesterday, as I had intended, having learned, since I came into this hall to-day, that the remarks I made were misunderstood by some of the gentlemen present, and were considered as not complimentary; which was the very reverse of what I intended. In expressing my approval of your excellent and elaborate address, I said, or intended to say, that I could, from my own experience—having been engaged in medical training, teaching and examining for license for upwards of a quarter of a century—bear witness to the advantages resulting from the more extended curriculum, and increased length of the courses of lectures at present; whereas, when the course of lectures was of only twelve or thirteen weeks' duration, the candidates came up exceedingly weak and ill-prepared; but now, when the course was five or six months long, the difference was most apparent, and only at the last examination of candidates by the College, two young men, citizens of the United States, who wished to practise in Canada, passed examinations before our College that did honor to themselves and the profession to which they belong, and would have done credit to young gentlemen coming from any of the European schools.

In conclusion, I have to thank you, Mr. President, for the patience with which you have heard me.

Medical News from Foreign Journals.—Exploded in almost every other part of Europe, homœopathy seems to be in high favor at the Spanish Court, under the immediate patronage of the Queen. Some time since a Homœopathic Academy was founded, and its president received letters of nobility; and now we learn that the government has ventured upon the establishment of a professorship and clinic. The Faculties of Medicine of Madrid have entered so vigorous a protest against further tampering with truth and with the lives of patients that great hopes may be entertained that the obnoxious decree will be withdrawn.

M. Broca's health has become so seriously affected by overwork that he has been obliged to leave Paris for the South of France, with a view to its restoration.

Hippophagism is still making progress in Paris. The Prefet of Police has authorized two establishments for the sale of horseflesh. These are to be inaugurated by a great popular banquet, to which the wives of chefs d'atelier and of workmen alone are to be invited, it being naturally understood that the only chance of introducing this substance into the domestic dietary must be through the instrumentality of the female portion of the community. But alas! how unstable is greatness and success; when all seems smiling in the prospect of the acquisition of this new viand, it is threatened to be displaced, almost before it has acquired a footing, by the discovery of another long-neglected variety of animal food, not in the shape of the unmanageable

charqui, but of the muscles of that patient, ill-treated, serviceable beast of burden, the common ass. At a banquet given by an Academician, having MM. Velpeau, Tardieu, Latour, and other notabilities as his guests, the "bifsticks" and "filets" prepared from the flesh of an old she ass were unanimously pronounced as more tender, succulent and delicate than similar *plats* prepared for comparison from the horse. A little nonsenical qualmishness was at first displayed by some of the guests; but on the whole this asinine triumph was complete.

Physicians who attend Parsee patients are always charged to give timely warning of approaching death to the friends of the sick man. When it is believed that he is drawing near his end, the attendance of the physician is dispensed with; the dying man is then given over to two Parsee attendants, who divest him entirely of clothing, and convey him to a chamber on the lowest floor, from which all the furniture has been removed, and in which there is nothing but two stones. The poor man is placed upon these stones, held up in a sitting attitude by one of these men, and his body is besmeared with cow's urine. If possible, he must be made to drink some of the same; this is regarded as of great importance, and, under the circumstances, of singular efficacy in fitting his spirit to appear before the Judge of all. After this, a quantity of warm water is poured upon the poor man, one vesselful after another, and in the majority of instances the vital spark is extinguished at this time.

M. Lafond, of Agde, South of France, has recently published a fearful case of rabies in a young man, which proved fatal in twenty-four hours. The symptoms were of an appalling description, and the case looked as if it was of spontaneous origin. By careful investigation it was, however, found that the patient had been desired by his master to drown a dog whose peculiarities had raised suspicion. The patient was very fond of the dog, and fondled him before committing him to the water. The animal had reciprocated the caresses of the young man, and licked his face, hands and even mouth. Thus it would appear that a contact of this kind is sufficient to generate this distressing complaint.

Dr. Sanderson, who was deputed by the Lords of the Privy Council to investigate the epidemic at Dantzic, reports that the main symptoms in the cases which he had seen were—pain in the back of the head and neck, retraction of the head, and urgent vomiting, followed by a state of unconsciousness, more or less complete, with eyes fixed and lustreless and pupils insensible to light, pain being now only complained of when the patient was moved. There was no tenderness along the spine, and no tetanic spasms of the muscles of the neck or of any other muscles. Death in many cases was due to congestion of the lungs. The appearances found after death were those of unmistakable inflammation of the membranes of the brain and spinal cord, associated with congestion of the lungs, hyperæmia and softening of the spleen, and a fluid condition of the blood.

To the names of Falconer and Gratiolet, eminent men of science lately deceased, must be added that of Mr. Christy, whose last years of life have been devoted to investigations in France tending to prove the antiquity of man's presence on the earth.

"Cosmos" states that, according to a German author, the number of useful plants has risen to about 12,000; but it must be remembered that these researches have been completed only in certain parts of the earth. There are no less than 2,500 known economic plants, among which are reckoned 1,100 edible fruits, berries and seeds; 50 cereals; 40 uncultivated edible graminaceous seeds; 23 of other families; 260 comestible rhizomes, roots, and tubers; 37 onions; 420 vegetables and salads; 40 palms; 32 varieties of arrowroot; 31 sugars; 40 saleps. Vinous drinks are obtained from 200 plants; aromatics from 266. There are 50 substitutes for coffee; 129 for tea. Tannin is present in 140 plants; caoutchouc, in 96; gutta percha, in 7; resin and balsamic gums, in 389; wax, in 10; grease and essential oils, in 330. Eighty-eight plants contain potash, soda and iodine; 650 contain dyes; 47, soap; 250, fibres which serve for weaving; 44 for paper making; 48 give material for roofing; 100 are employed for hurdles and copses. In building 740 are used; and there are 615 known poisonous plants. According to Endlicher, out of 278 known natural families, 18 only seem up to the present time to be perfectly useless.

The semi-annual meeting of the Vermont Medical Society will be holden at Stowe, on the 28th and 29th of the present month. We are promised a sketch of the proceedings, which we shall be glad to notice in the Journal. We understand that the Transactions of the Society for the last year are soon to be published—making the first volume of proceedings issued by the Society.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, June 17th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	34	33	67
Ave. mortality of corresponding weeks for ten years, 1853—1863,	34.3	32.4	66.7
Average corrected to increased population - - - - -	00	00	73.86
Death of persons above 90 - - - - - - - - -	0	0	0

Books and Pamphlets Received.—The Essentials of Materia Medica and Therapeutics. By Alfred Baring Garrod, M.D., F.R.S., &c. New York: W. Wood & Co.—Hypodermic Injections in the Treatment of Neuralgia, Rheumatism, Gout, and other Diseases. By A. Ruppaner, M.D. Boston: T. O. H. P. Burnham.—The Renewal of Life. Lectures: chiefly Clinical. By Thomas King Chambers, M.D. From the third London Edition. Philadelphia: Lindsay & Blakiston.—Report on the Keeping of Swine in the City of Providence. By E. M. Snow, M.D.

Married,—In this city, 19th inst., John G. Blake, M.D., to Miss Mary E. McGrath, of South Quincy.

Died,—In New Bedford, Dr. Lyman Bartlett, aged 58.—At Bridgewater, N. H., June 18, Dr. Sylvester Scott, aged 40.

Deaths in Boston for the week ending Saturday noon, June 17th, 67. Males, 34—Females, 33. Abscess, 1—accident, 3—inflammation of the bowels, 1—congestion of the brain, 1—bronchitis, 1—cholera infantum, 2—consumption, 14—convulsions, 2—croup, 1—diarrhœa, 1—diphtheria, 1—dropsy, 3—drowned, 1—dysentery, 2—scarlet fever, 2—typhoid fever, 2—gunshot, 1—disease of the heart, 3—infantile disease, 3—insanity, 1—inflammation of the lungs, 4—marasmus, 2—old age, 1—paralysis, 2—premature birth, 1—puerperal disease, 1—smallpox, 1—suicide, 1—tabes mesenterica, 1—unknown, 7.

Under 5 years of age, 21—between 5 and 20 years, 5—between 20 and 40 years, 15—between 40 and 60 years, 20—above 60 years, 6. Born in the United States, 44—Ireland, 17—other places, 6.

THE

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DEFORMITY OF THE PELVIS PRODUCED BY PROJECTION OF THE SACRAL PROMONTORY.

[Read before the Providence Medical Association, and communicated for the Boston Med. and Surg. Journal.]

BY GEORGE CAPRON, M.D.

THE design of this paper is to call your attention to a class of obstetrical cases in which the use either of the forceps or the perforator is frequently required. The class to which I refer consists of those cases in which the antero-posterior diameter of the pelvis is diminished, principally by an excessive growth and consequent abnormal projection of the promontory of the sacrum, and in a less degree by a general enlargement of the bones entering into the structure of the upper strait of the pelvis.

When this deformity exists only in a slight degree, it may not prove an insurmountable obstacle to the natural delivery of a small child in a favorable presentation. There are some women whom I have attended who have had some of their children, particularly females, unaided; but who, under less favorable circumstances, have required the intervention of art. And it may be remarked, in this connection, that the knowledge of the fact that a woman has had one or more natural labors may not always be a sufficient reason for leaving the case to nature. A difference in the size of the head of the child, or a difference in the presentation, may make the difference between a living child and a dead one, to say nothing of the increased danger of the woman when left to labor too long to overcome an insuperable obstacle. Where the deformity exists in an aggravated degree, the intervention of art will always be required, and the great practical questions are, how and when art should come in to the aid of nature, or to take the case out of her hands. Before answering these questions, that is, before giving you my views upon the subject, you will allow me to premise a few remarks upon the frequency and causes of the deformity under consideration, based upon personal experience.

Somewhat extensive observation has led me to the opinion that this is by far the most common deformity met with in practice in

this city and vicinity; perhaps I may say that the ratio of its frequency is not less than ten or twelve to one of any other that has come under my observation. The query suggests itself, why is this deformity more frequent than others, or, in other words, what is the cause of it? Is it caused by an irregular growth of diseased bone, or is it only an excessive growth of healthy bone? That it is the latter seems to me very evident, for the following reasons. First. It is found to exist in women who are and always have been strong and healthy. Secondly. It is much more frequently met with among laboring women than among the indolent, and consequently delicate, classes. Among the Irish women it is of frequent occurrence, while among American women, particularly the wealthier classes, it is extremely rare. We have in this fact an explanation of the reason why there are so many more stillborn children among the Irish than among the American population in proportion to the number of births. If this deformity were caused by disease of the bones, the general system would necessarily have suffered severely and for a long time, and other deformities would be likely to co-exist. The reason why this particular deformity is more frequent among Irish women than among American, is easily explained by the different circumstances under which they have grown up, and the different occupations they have followed. In Ireland, the lower classes, among whom these deformities occur most frequently, are put early to hard labor—planting and digging potatoes, carrying heavy loads upon their backs or heads, and other occupations, as servants to the rich, not less laborious—and when they arrive in this country it is only a change of programme. They are employed to do the hard work in families and hotels; washing and ironing, carrying water up and down stairs, carrying hods of coal and scrubbing floors are among their daily tasks. These occupations require great muscular strength, and their muscular systems are developed in proportion to the demand. They require a strong frame-work for this powerful muscular system to act upon, and to sustain the great weight so frequently put upon it, and the bony structure is correspondingly developed as a physical necessity. The bones of the pelvis, the sacrum particularly, and the lower lumbar vertebræ, constituting as they do the base of the spinal column, upon which all superincumbent weight must be sustained (whether such weight be carried in the hands or arms, or on the back or head), must of necessity grow and expand, or bend and break. In a slow and gradual manner nature accommodates herself to the circumstances, and the female pelvis becomes strengthened and enlarged, approximating in conformation to that of the male. What is added to the size of the bones must in part be taken from the spaces between them. This, in brief, is to my mind a satisfactory explanation why so many large and fully-developed women, when viewed in their exterior, have hard and difficult labors. In American women

these circumstances are nearly all reversed. Even our farmers' daughters, though they perform more or less labor, are still brought up and educated more like ladies than like servants, and are rarely compelled to perform laborious duties till they have arrived at maturity, after which, the process of ossification being nearly completed, important changes are less liable to occur. As a general rule, they have favorable labors. In our manufacturing towns and villages, girls are, it is true, put to work at an early age; but their employments are of a light kind, requiring activity rather than strength. Close confinement and want of pure air in the manufactories, and in some instances perhaps an insufficiency of nutritious food, may, and I think do, cause certain diseased deformities and an imperfect development of the osseous structure, and an occasional case of difficult labor may occur, but these cases are rare and of a different character from those under consideration.

Not to tire your patience with further details of the subject, I will briefly remark that I am of opinion that by knowing the habits and pursuits of a people—whether nations, races or classes—we may arrive at a very just opinion as to the general character of their labors. I would not be understood to mean that such an opinion could be formed when reference was had exclusively to those influences which tend to mould the bony structure; but by knowing the habits and pursuits of a people we should, also, be enabled to form a judgment of the degree of development of the muscular system, and of all the organs that are concerned in parturition. It was not my intention to refer to any authority upon this subject, but since writing the above I incidentally met with a passage in Bedford that suits my purpose, and with your permission I will quote it:—

"There exists, also, a very remarkable discrepancy of opinion among writers as to the relative frequency of locked-head compared with other formidable obstacles calling for the interposition of science. The example, while it is conceded that it is of rare occurrence in France, our own distinguished countryman, Dr. Dewees, avows that he has never recognized an example of it in his practice, which circumstance he refers to the fact of the generally prevailing healthy or normal pelvic conformation of our American women; yet we have a high authority, Camper, assuring us that, in Holland, locked-head is by no means among the rare occurrences of the parturient chamber. This discrepancy, it seems to me, arises from the circumstance of the general want of concurrence as to the true meaning of the term locked-head; for I can see nothing in the women of Holland so marvellously different from those either of France or America which could rationally account for the very extraordinary alleged difference in the relative frequency of the complication under discussion. Therefore, I repeat, locked-head is one thing in Holland, another in France and our own country."—*Bedford's Principles and Practice of Obstetrics*, p. 602.

I will briefly remark that there is in my mind no doubt of the correctness of Dr. Dewees' opinion respecting American women. Of the women of Holland I have no personal knowledge, but I can more easily conceive that there may be circumstances which cause a difference in the conformation of the women of different countries, than that such men as Dewees and Camper should be ignorant of what constitutes a locked-head, or that locked-head is understood to mean one thing in one country and another thing in another country.*

To return to the practical questions, how and when it becomes our duty to come to the aid of nature, or, if she have entirely failed, to take the case out of her hands and substitute art in these deformities, it may be remarked that the first question to be decided is, whether delivery can be effected with the forceps, or whether craniotomy must be resorted to in order to save the life of the woman. That the lives of a great many children have been sacrificed that might, by the use of suitable forceps in skilful hands, have been saved, does not in my mind admit of a doubt. Perhaps there are very few obstetricians of any considerable experience who cannot recal a larger or smaller number of cases in which craniotomy was performed, and in which after-experience with the same woman has shown that the operation was unnecessary. If I mistake not, the French and Germans use the forceps six or seven times as frequently as the English, while the English open the heads of many more children than either. Religion makes this difference. In Catholic countries, and among Catholics in all countries, the Church peremptorily forbids the practice of destroying one life to save another, and hence craniotomy is never permitted by them unless there is positive evidence that the child is dead. By waiting for this event to take place in cases in which delivery cannot be effected with the forceps, the life of the woman is very much endangered and is not unfrequently lost. It must be conceded, however, that some good has grown out of this peremptory rule of the Church. The frequency of destroying the child under doubtful circumstances has been lessened, the forceps have been improved, more skill and tact have been acquired in their application, and the full extent of the applicability and power of the instrument have become more generally and fully understood and appreciated. In the deformity under consideration, resulting, as I have presumed, from an excessive growth of bone rather than from disease, it fortunately happens that in a very large proportion of the cases the antero-posterior diameter of the pelvis is not lessened to such a degree as to prevent the de-

* Having practised twelve years in a part of the country where, at the time, with the exception of a few Scotch and English, the population was purely American, and since that time nearly thirty years in this city, where my obstetric practice has been somewhat extensive among the Irish, an opportunity has been afforded me of comparing the character of the labors of the two nations. I find, too, that my experience corresponds with that of several other physicians who have been similarly situated.

livery of a living child, if the delivery be accomplished at the proper time.

In answering the question, therefore, how we shall interpose art in these deformities when nature fails, I wish it to be understood that I am most decidedly in favor of essaying the forceps in all cases in which there is a possibility of success; that I believe they may be made available in a very great many instances in which craniotomy is usually resorted to; that many lives may thereby be saved, and that I consider the hasty resort to so revolting if not wicked an operation as opening the head of a living child as highly culpable and inhuman.

Perhaps there are few questions that are more difficult to answer, or in reference to which we have more solicitude, than as to the time when we shall cease to trust to nature and proceed to deliver, in order to give both mother and child the best chance for life. We always feel a reluctance to propose the use of instruments, as it at once conveys to the mind of the patient and her friends the idea of unusual difficulty and danger, and we are hence induced to wait in constant expectation that a favorable change will take place and relieve us from the disagreeable necessity of creating an alarm, or, perhaps, from the vexation of meeting with a decided opposition to our plans. In the meantime, the child's head is being compressed into a smaller and smaller compass, and its chances of life are momentarily lessening, and, when at last we are compelled to deliver, we find that we have waited too long. The child is dead, and we may congratulate ourselves on our good fortune if its death is not attributed to the use of instruments, and some sage old woman darkly hint that if the labor had been left to nature the child would have been alive. In primiparæ there is sometimes a peculiar difficulty in deciding when we should act. There are so many causes which combine to retard labor, which are not likely to exist in multiparæ, such as rigidity or slow development of the os internum, an unyielding condition of the other soft parts, exhaustion, &c.; and the difficulty of measuring the capacity of the pelvis, while it is occupied by the head of the child, is so great that we are often halting between two opinions for a long time before deciding upon what, to the patient at least, appears to be an extreme measure. In multiparæ, the capacity of the pelvis having been tested, the woman having given birth to two or three stillborn children, after tedious, and perhaps instrumental labors, the time when we should act is evident, and it is to this point to which I wish more especially to call your attention, as the life of the child will be saved or lost in proportion to the judgment and skill of the accoucheur. In primiparæ, I know of no better rules for the use of instruments than those laid down by authors upon that subject; the head being locked in the upper strait, no perceptible progress being made under what appear to be efficient pains, the scalp becoming much tumefied, or

exhaustion supervening, while, at the same time, the soft parts are developed to such a degree as, in the judgment of the attending physician, will allow of the application of the forceps without the danger of lacerating the uterus or other soft parts. It is, to say the least, very desirable that the head should have entirely escaped from the uterus, and I would suggest that this may be assumed as a rule, liable, however, to some exceptions. I have in a few instances applied the forceps within the neck of the uterus with safety, but should never do it except to avoid a greater danger. In women who have borne children, the development of the os uteri usually progresses more rapidly, and there will not, in a majority of cases, be a sufficient amount of labor to destroy the child before the soft parts are in a condition to admit of safe delivery. The time to deliver in these cases is immediately after the os uteri has slipped over the head, or, if there are causes which prevent this from taking place in a normal manner, as soon as the os is sufficiently dilatable to admit of the use of the forceps without endangering the integrity of the uterus. After the os uteri has passed fairly over the head, the character of the pains changes. The uterus contracts with more power and less suffering, and the whole force of the abdominal muscles is added to that of the uterus in the vain struggle to expel the child, whatever the resistance. Under these circumstances, the chances are that the life of the child will soon be destroyed. It is the constant and long-continued pressure between the bones that kills the child rather than the amount of pressure; in other words, a small amount of pressure continued for a long time will destroy life, while a much greater amount may be harmless, if continued only for a short time. I am not unaware that in natural labors the head of the child is often very much compressed, elongated, and moulded to the form of the maternal organs without serious injury; but in natural labors the compression is effected principally by the soft parts, and the head not being immovably fixed in the bones, recedes during the intervals between the pains, and the circulation in the brain, which is temporarily retarded by compression, is at each interval reëstablished. On the contrary, even in natural labors, the life of the child may be destroyed by compression of the brain caused by the incessant contraction of the uterus produced by an injudicious use of ergot. In support of these views, I propose to state a few cases from memory.

Case I.—An Irish woman had three or four girls born alive; subsequently, she had seven or eight boys, all stillborn. Some were delivered by the forceps, some by craniotomy, and perhaps some were forced through by the natural pains. I delivered her of her last child with Channing's short forceps. The head was high up, resting rather above than in the upper strait, and the handles of the forceps were buried within the vagina. The projection of the promontory was rather unusually great in this case, and it is not cer-

tain that any of the boys could have been born alive, but inasmuch as she had had living girls it is more than probable that instrumental delivery would have been successful in some of the cases had it been resorted to at the right time. But, as far as I know and recollect, the right time was always allowed to go by. The children were doubtless dead before delivery was attempted.

Case II.—Some twelve or fifteen years since, I was called to deliver a woman in Gaspee St., in her first confinement. On my arrival at the house, I found that she had been in labor three days, under the care of a noted midwife, and that, for many hours, the pains had been extremely hard. At the time of my arrival the pains had in some measure subsided from exhaustion, the head was locked in the upper strait, and the os internum was fully dilated. I informed the woman and her friends that the child was probably dead, but if alive I was confident it could be delivered without injury. They promised to be satisfied with the result, if the life of the woman could be saved. The forceps were applied, and a dead child delivered without unusual difficulty. At her next confinement I was sent for to attend her, and succeeded in persuading her to be delivered as soon as the soft parts were in a suitable condition. The child was of fair size and living. Whether I delivered her of another living child or not I do not recollect, but I have an impression that I did. In her third or fourth confinement she employed the midwife who attended her in her first. As her labor did not progress favorably the midwife became alarmed, and I was sent for in the middle of the night; but some details of the case given by the messenger, and my knowledge of the conformation of the woman, led me to strongly suspect that the uterus had ruptured before they sent. Not wishing to take charge of the case under the circumstances, I declined going. What I suspected, proved to be the fact. The uterus had been ruptured, and I was informed that she died while an attempt was being made to deliver her. In this case the deformity was not so great but that she might, by the right means at the right time, have been delivered with safety to herself and probably to her child. She was a healthy woman, and, as far as I recollect, exteriorly well formed.

Case III.—Some half a dozen years since, I was requested to meet Drs. F. and C. in the case of Mrs. M., who was in labor with her first child. It was about 3, P.M., when I met the physicians, from whom I learned that the woman had been in labor two or three days. In the afternoon of the day preceding our consultation, the pains, which had been hard and regular, subsided, and notwithstanding that ergot had been given in liberal doses they had not returned. It had now been twenty hours or more that there had been no uterine effort. Upon examination, it was found that the head was firmly wedged in the upper strait. The os uteri was out of the way, and the other soft parts were in a favorable condition. The general

aspect of the patient was much better than could have been expected under the circumstances. The consultation was short. There was no difference in opinion as to what must be done. The woman must be delivered. The only question was, how? I proposed to deliver with the forceps. Dr. F. replied, "If we can." I remarked that we could try, and in case of failure open the head. There was every reason to believe that the child was dead, though it might possibly be alive. By request, I applied a pair of long forceps (Hodge's), and delivered a dead child without unusual difficulty or delay. After delivery, it was found that she had the difficulty of which we are speaking in a marked degree. A year and a half, perhaps, afterwards, I was called to attend this woman in her second labor. Knowing the existence of the deformity, I told her that if she would consent to be delivered when I thought proper to do it, I would endeavor to deliver her of a living child. She agreed to my terms, and I availed myself of the earliest moment that the forceps could be applied with propriety, and delivered her of a living child. Where the head had rested on the promontory of the sacrum, there was an irregular oval depression, which would have received nearly or quite one half of the shell of a butternut. This depression was on the right and anterior part of the head, over the anterior part of the parietal bone. This child is now alive. The depression is nearly obliterated, and, as it is covered by hair, occasions no deformity. In due time I was called to this woman again. The same course was pursued. The child was alive, and had a similar depression on the opposite side of the head. The intellect of these children was apparently not injured. The fourth labor of this woman was more unfortunate. It was a breech presentation. The child was large, and there was great difficulty and delay in delivering the body; and, as was anticipated, the head could not be brought through the upper strait without great force. I applied the long forceps, and finally succeeded in delivering it. It is needless to say the child was dead. The woman had inflammation, but ultimately recovered.

Case IV.—Mrs. C. had two or three stillborn children in consequence of this deformity. I have since delivered her of two living children. The deformity in this case is not extreme, but sufficient to destroy her children when left to nature.

Case V.—In the same house with Mrs. C. lives a woman whose name I do not recollect, who, with her first child, is said to have had a very tedious and hard labor. The child was stillborn. In her second confinement, I was called. She had already been in labor some time when I arrived, and objected to the use of instruments for fear they would kill the child. When at last she consented from necessity, it was too late—the child was dead. I have since delivered her of a living child, by operating as soon as the conditions were right.

Case VI.—A woman in Clifford St. had two or three stillborn children, after very hard and protracted labors. I have since deli-

vered her of two living children and one stillborn. The last was an arm presentation. Ether was administered and the child turned, but the head was delivered with difficulty, and the child lost of course.

Case VII.—A Mrs. M. had been delivered a number of times with instruments. Some of her children have been dead and some alive. The last two have been saved by timely delivery.

Case VIII.—A woman on Spruce St., whom I attended a few months since, has this deformity in a degree that admits of the birth of a living child by instruments, but not without them.

Case IX.—Mrs. McKenna, a young, healthy, and apparently well-organized woman, rather below the medium height and of a moderately full habit, has the deformity under consideration in a marked degree. She has given birth to five children. In her first confinement she was attended by the late Dr. Fearing, whose great experience and skill are well known. After a hard and tedious labor, she was delivered of a stillborn child, with the forceps. In her second confinement, she was attended by a woman. I was sent for, but the child was born when I arrived. It was stillborn. In her third confinement I attended her, and delivered her with the forceps. This child was also stillborn. I attended her in her fourth confinement, and attempted to deliver with the forceps, but, owing to the disparity between the size of the head of the child and the capacity of the pelvis, I was unable to deliver her with any force I thought prudent to use. Counsel was called, and, as it was morally certain that the child was dead, it was delivered by craniotomy. Her fifth child was a very small girl, and was born alive without assistance.

Case X.—Two or three years since, I assisted Dr. —— in the delivery of a woman in her first confinement. The child was dead. As Dr. —— declined attending her again, I was sent for in her second confinement. She had the deformity under consideration. The forceps were applied as soon as practicable, and she was delivered of a living child.

Of this class of cases I might refer to many others, but it is unnecessary. When the deformity exists in an aggravated degree, delivery with the forceps is impracticable. The head cannot descend into the pelvis, and consequently does not distend the os uteri. Under these circumstances the os cannot retract over the head. The fact that the head does not, under powerful contractions of the uterus, descend and become fixed in the upper strait, is strong presumptive evidence that the deformity is so great that delivery cannot be accomplished with the forceps. Thus situated, the child may live till its life is destroyed by a failure of the maternal forces. I recal a number of these cases, in which the mothers were lost by waiting for the children to die. One woman died undelivered. The privilege of delivering her at a late hour was offered me, but I declined. The attending physician opened the body a few hours after

death to remove the child. The uterus was congested, and, in places, gangrenous, particularly about the neck. I requested the physician to pass his hand down through the upper strait and measure the antero-posterior diameter, and it was ascertained that it did not exceed three inches. Early craniotomy would have saved this woman, but it was her only chance. I recal several other similar cases, two in particular, within a few years, in which the women were delivered, but too late. They died.

The form that this overgrowth of bone takes on is by no means always the same. In some instances the projection is broad and uniform, in some irregular, and in others the point is either conical or wedge-shaped. An instance of the first I have seen within a few days, in which I could, without difficulty, explore the whole region. An instance of the second occurred in the third case related, in which there was an irregular depression on the anterior part of the parietal bone. Of the last, an instance occurred in a case I attended in the first part of January, two miles in the country. The call came to the house late in the evening. It happened that I had not my forceps at hand, and, learning from the husband that his wife had given birth to a number of children and had not required the use of instruments, I unwisely went without them. The case did not progress favorably, and I discovered by the posterior direction of the anterior fontanelle that it was an occipito-anterior presentation, and that artificial delivery would be necessary. I sent for my instruments, which took an hour or two, during which time the child died. When delivered, there was a depression on the child's head across the upper and anterior part of the parietal bone, which had the appearance of having been made by forcible pressure on the edge of some hard substance. While delivering the placenta, I explored the pelvis, found and examined the projection. It was wedge-shaped, quite thin at the edge, and evidently unnaturally prominent.

All the cases above related, and indeed many others that come to my recollection, as I take a retrospect of the forty years or more that have elapsed since I first attended a woman in labor, occurred in Irish women. They were all healthy women, and had been accustomed to hard labor. Their muscular systems and uteri, as far as could be known, were largely developed and powerful. Comparatively very few similar cases have occurred in American women.

Should it be inferred, from the above cases and remarks, that I am an advocate for the frequent use of instruments, or in any other way interfering with the natural course of labor when there is a probability that nature will, unaided, accomplish the end with safety to mother and child, I must most emphatically plead not guilty. On the contrary, I have, perhaps, been too cautious, and in many instances have waited so long for Dame Nature that I have sacrificed the child to my confidence in her ability. Perhaps it may be said

that some of these views, and what I consider to be rules of practice, differ from those of the standard authorities upon this subject. If so, I would say that my observations may have been made from a different point of view. It is a different aspect of the subject, and if they are right it is not an evidence that I am wrong. I would remark, however, that in my opinion, the rules of practice in these cases—the *how* and the *when* to operate—are not as clearly pointed out as might be with advantage to the inexperienced.

In conclusion, I would say that, while unnecessary and injudicious interference in a labor that is progressing favorably is highly censurable, the fact is indisputable that the forceps are one of the greatest blessings to women, and, in as far as life is desirable, a boon to the unborn child.

ON THE SOLVENT TREATMENT OF URINARY CALCULI.

By William Roberts, M.D., Physician to the Manchester Royal Infirmary.

This paper is divided into two parts. The first part is devoted to experiments and observations relating to the solvent treatment of uric-acid calculi by alkalizing the urine by internal medicines. The inquiry starts from two known data—namely: first, that uric acid is dissolved by solutions of the alkaline carbonates of a certain strength; and secondly, that alkaline carbonates can be introduced into the urine, so as to render it alkaline, by the administration of certain salts by the mouth. The practicability of dissolving renal and vesical calculi, composed of uric acid, by alkalizing the urine, is inquired into under ten headings, or sections, as follows:—

Section 1.—Comparison of solutions of carbonate of potash and carbonate of soda: in which it is shown that solutions of carbonate of potash are better solvents for uric acid than solutions of carbonate of soda.

Section 2.—Comparison of solutions of different strength: in which it is shown that the greatest solvent power (for uric acid) lies in solutions containing from forty to sixty grains of carbonate to the imperial pint. Above this strength dissolution is soon prevented by the formation of a crust of biurate, which invests the stone. Below this strength the solvent power gradually declines.

Section 3.—Comparison of the effects of varying volumes of solutions of constant strength. It is shown that the quantity of the solution permitted to pass over the stone, between the limits necessarily imposed by the capacity of the kidneys to separate aqueous fluids, is of slight importance. A flow of three or six pints during twenty-four hours was found nearly as effective as a flow of eight or fifteen pints.

Section 4.—Absolute rate of dissolution of uric-acid calculi in so-

lutions of the alkaline carbonates.—It is shown that solutions of carbonate of potash, of the maximum solvent power, when passed at the rate of from three to eight pints in the twenty-four hours over uric calculi, at the temperature of the body, dissolve from ten to twenty per cent. of the stone each day.

Section 5.—The most convenient way of alkalizing the urine, the degree of alkalescence which can be communicated to it, and the doses required to produce the desired effect.—The bicarbonate, acetate, and citrate of potash are found the most effective substances to alkalize the urine. Of the three, the citrate is preferred. It is found that forty grains of citrate of potash dissolved in five ounces of water, taken every two hours, alkalizes the urine to a mean degree corresponding with the maximum solvent power of solutions of carbonate of potash.

Section 6.—The effect of alkalized urine on uric-acid calculi.—The urine of a person taking full doses of citrate of potash, as recommended in Section 5, is passed over a uric-acid calculus at blood heat. The stone (weighing 180 grains) loses weight at the rate of twelve grains and a half in twenty-four hours. In the performance of experiments on this point it came out that if the urine became ammoniacal (from decomposition of urea), it ceased to dissolve the uric acid, and the stone became invested with a crust of precipitated phosphates. Whence the important deduction is drawn, that ammoniacal decomposition of the urine, in cases of vesical calculi, puts an absolute bar to the effectiveness of the solvent treatment by alkaline carbonates.

Section 7.—Illustrations of the application of the solvent treatment in practice: first in renal calculi, secondly in vesical calculi.—Two cases of complete dissolution of uric-acid calculi in the bladder are quoted from other authors. The author relates three cases which occurred in his own practice. In none of the latter did complete dissolution occur. One of the cases proved to be an example of mulberry calculus; another, an alternating calculus of uric acid and oxalate of lime. The second specimen offers peculiarities of surface which indicate with certainty that dissolution of the uric acid had taken place: these peculiarities are explained by the aid of drawings of the stone after extraction. The third case proved abortive, apparently because the treatment was not carried on sufficiently long. In neither of the cases was the treatment carried out as effectively (as the later experience of the author showed) as it might have been. The principal instruction from the cases is, the proof they offered that alkalizing the urine does *not* cause the stone to be encrusted with a phosphatic deposit, so long as ammoniacal decomposition of the urine does not take place.

Section 8.—Discrimination of the cases in which the solvent treatment is and is not applicable.—The conclusions come to are: That the solvent treatment is inapplicable in all cases where the urine

is ammoniacal. When the urine is acid (before treatment) the case is *primâ facie* suitable for the alkaline solvent treatment; but exceptions must be made of cases where it is known or strongly suspected that the stone is composed of oxalate of lime, also where the stone is large. In cases where the urine is acid, and there is no indication of the nature of the stone, it may be either uric acid or oxalate of lime, or an alternating calculus composed of these two substances. Such cases deserve a trial of the solvent treatment for a limited period of a month or six weeks. The cases which are especially suitable for the solvent treatment are those in which (the urine being preliminarily acid) it is known or strongly suspected that the stone is composed of uric acid, and has not yet reached any large size.

Section 9.—Directions for carrying out the solvent treatment effectually.—The urine must be kept *continuously* alkaline, and alkaline to a mean degree corresponding with the maximum solvent powers of solutions of carbonate of potash. The treatment must be given up immediately if the urine become ammoniacal.

Section 10.—An examination of some of the objections which have been urged against the principles of the solvent treatment.

The appendix to the first part contains some experiments showing that cystine is even more amenable to the alkaline solvent treatment than uric acid.

The second part of the paper contains three sections.

Section 1 contains experiments on the solvent treatment of uric-acid calculi by injections into the bladder. Solutions of the following substances were tried in a manner to imitate injections into the living bladder: bicarbonate and carbonate of potash, common phosphate of soda, basic phosphate of soda, borax, borax with liquor sodæ, potash soap, carbonate of lithia, liquor potassæ, and liquor sodæ. The results obtained demonstrated conclusively that their operation was so slow that no practical advantage could be obtained from their use.

Section 2 records some experiments on the effects of a solution of carbonate of soda and dilute nitric acid on oxalate-of-lime calculi: neither solvent promised any useful result.

Section 3 shows the unsusceptibility of phosphatic calculi to solutions of the alkaline carbonates. Brodie's method of injecting dilute nitric acid into the bladder was imitated in one experiment, with results confirmatory of his statement respecting the use of this treatment in phosphatic concretions.—*Proceedings of the Royal Medical and Chirurgical Society*, in *London Lancet*.

THERE were 15,875 deaths reported in Philadelphia last year, 15,591 births, and 6,752 marriages. Four sets of triplets were reported. About one in thirteen of the deaths were of colored persons. There were 2089 deaths from consumption.

Bibliographical Notices.

The Essentials of Materia Medica and Therapeutics. By Alfred Baring Garrod, M.D., F.R.S. First American from the Second English Edition. New York: William Wood & Co. 8vo. Pp. 439.

We are told by the author that this work "is intended to serve as a text-book of Materia Medica;" and that "it omits nothing essential to the study of the science," while "it excludes such details as are often embarrassing to the student and seldom necessary to the practitioner." This is a concise and accurate description of the work. We had carefully examined the English edition before we saw the American one. From a brief examination of the latter, we believe it to be a faithful reproduction of the former. The Essentials of Materia Medica is not an encyclopœdia of the science, like that of Pereira, nor a series of monographs, like that of Stillé. It is rather a catalogue of the principal articles of the modern materia medica, with a brief statement of their natural history, their physical and chemical properties, their physiological action when this is known, and their therapeutical uses and dose. The physician will find its chief value to be that of a book of reference, in which he can see, at a glance, what are the important uses and dose of any article he may wish to prescribe. It contains no elaborate discussion of the physiological or therapeutical action of any drug, and therefore will not take the place of those comprehensive works on materia medica and therapeutics which have appeared during the last quarter of a century in Europe and this country. It is an excellent text-book, or rather guide for the medical student, inasmuch as it points out to him the articles that are most worthy of study. But it will not do for him to rely upon this alone. He should read other works if he would know even what is essential in modern materia medica. While studying others, and after having studied them, he will find this of value, first as a guide in his studies, and then as an aid to his memory afterwards.

In his preface to this edition, Dr. Garrod promises that it shall be followed by another work, "devoted exclusively to the consideration of the value of medicines in the treatment of disease." We are looking with great interest for the appearance of this promised book. Even Dr. Garrod will find it no easy task to point out the just value of medicines in therapeutics. We hope that he may be successful. E. H. C.

Handbook of Skin Diseases, for Students and Practitioners. By Thomas Hillier, M.D. Lond., Physician to the Skin Department of University College Hospital, &c. With Illustrations. Philadelphia: Blanchard & Lea. 1865.

"What is the best book on Skin Diseases," is a question so frequently asked of those engaged in clinical instruction, as to leave no doubt of the non-existence of a treatise on this subject in our language fit to be placed in the hands of a student. Hardy's Manual is an excellent book, barring the French theory of diatheses, and Prof. Hebra's exhaustive work, now being published as part of Virchow's Handbuch, will leave almost nothing to be desired in the literature of this department of medicine; but unfortunately only a small propor-

tion of students possess a sufficient knowledge of French or German to make these works available for general instruction. The same necessity seems to be equally felt in England, for within a few months as many as five books on cutaneous diseases have been published there, and the author of the little volume now before us states that he has written it to supply this necessity. "My object has been to furnish to students and practitioners a trustworthy, practical and compendious treatise, which shall comprise the greater part of what has been long known of cutaneous diseases, and of what has been more recently brought to light by English, French and German dermatologists, as well as to embody the most important results of my experience in reference to these diseases."

Dr. Hillier's remarks on the classifications of these and other writers on this subject are very judicious, and the objections which he raises to the antiquated and thoroughly unscientific system of Plenck and Willan, on page 20, would seem to be insurmountable, and yet to the reader's astonishment he is found, on page 23, adopting a classification, to be followed throughout the book, which is in reality the very plan he has just demolished. He arranges all diseases under four main divisions—"parasitic, acute specific infectious diseases, syphilides, and other diseases." That is to say, he throws out syphilis and the acute exanthemata, which are not strictly affections of the skin, and then sub-divides cutaneous diseases into parasitic and non-parasitic. To the latter, or "other diseases," which are of course by far the most numerous and important, he applies this system of Willan, a system of which we have so lately expressed our opinion at length in this JOURNAL that we will not repeat it here. In accordance with this plan, he has not only been obliged to separate and describe, as distinct diseases, conditions of the skin which he acknowledges are only stages or modified forms of one and the same affection, but he groups others under the same head which have nothing whatever in common. Indeed, were any evidence wanting as to the utter unfitness of such an artificial system for the study of these diseases, it would be found in the contradictions and inconsistencies which the author constantly exhibits in endeavoring to adhere to it.

With this exception, there is very little to condemn in the book. The descriptions of the various diseases are, in general, correct and concise, and accounts of several rare affections are introduced, which have not been hitherto noticed in English works. There are a few errors, such as the confounding of chloasma with pityriasis versicolor, and others which might be mentioned, and there is too little minuteness in the directions for treatment throughout the book. It is not enough to state that a certain article of the materia medica is good in this or that affection; the student requires to be told when to use this, and, what is of greater importance, when not to use it.

As a descriptive manual of diseases of the skin, we can on the whole recommend Dr. Hillier's book, but it fails entirely to supply the want of a work adapted to the instruction of students. Two plates, illustrative of parasitic affections, are given by the author, and the American publishers have, we think with great impropriety, made a reference under each disease to its representation in Neligan's "Atlas of Cutaneous Diseases," which is published by the same house.

A Monograph on Glycerin and its Uses. By Henry Hartshorne, M.D., Member of the American Philosophical Society, &c. Philadelphia: J. P. Lippincott & Co. 1865.

In this neat little book of sixty-eight pages the compiler has given us nearly everything yet ascertained relative to the properties, chemical relations, medical and pharmaceutical uses, and physiological action of one of the most remarkable and important substances in our materia medica. Possessed of wonderful powers as a solvent and preservative, and at the same time almost as inert as water, its chief value in our art lies in its employment as a vehicle for the administration and application of drugs in a more unchangeable and concentrated form than those hitherto used. Internally, it has been somewhat employed as a medicine in cough mixtures, phthisis and other diseases, but its therapeutic or nutritive powers must be very slight. We think the author has also dwelt too much upon its importance in cutaneous diseases, and has attributed effects to the vehicle which belong entirely to the substances combined with it. As a substitute for fat in ointments, and for water or alcohol in washes, there can be no doubt of its value in some cases, but by itself it has no curative action upon the skin. We can recommend this volume to our readers as an important chapter hitherto wanting in their works on materia medica.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JUNE 29, 1865.

American Ophthalmological Society.—It is to be regretted, we think, that, during the recent session of the American Medical Association in this city, the attempt to organize a Section of Ophthalmic Medicine was unsuccessful. The effort failed, as we understand, on account of the strong feeling expressed by some of the delegates that the establishment of such a section would be a recognition of the claims of a class of specialists, and would thus be a virtual decision upon the whole question of specialties, which was still in abeyance before the Association. We cannot but think that this opinion was entirely without just foundation. As well might it be said that any of the departments of medical science to which a section is devoted becomes thereby, in a bad sense, special in its character. As we understand it, a section is established merely as a matter of convenience and practical advantage, because the amount of scientific matter likely to be brought before it is such that it could not be fairly presented and discussed in sections already organized. A section is in reality nothing more than a standing committee on a particular subject, and can at any moment be dissolved when deemed expedient, as was done at the recent session of the Association in the case of the Section on Anatomy and Physiology. We are inclined to believe that, if the section asked for had been established, it would have proved to be one of the most interesting and fruitful in results of all the sections. A branch of medical science which furnishes the sole topic for a class of medical peri-

odicals of a very high character, which exclusively engages the attention of a large number of the most acute and philosophical minds in our profession at the present day, which has introduced within a few years so many new methods of diagnosis and treatment, giving to ophthalmology in some respects the character of an exact science, which has led to the formation of societies specially devoted to the subject, both in Europe and our own country—surely such a diligently cultivated field of research deserves the recognition of the Association which its friends desired.

The recent meeting of the American Ophthalmological Society in New York shows that there are devoted students enough of ophthalmic science in America to have made it worth the while of the Asso-tion to have recognized them. Its action must tend to alienate this large and valuable class of the medical profession. It is much to be regretted that its publications must be thus deprived of many articles which, while they would do it honor, would be likely to have a much wider circulation and exert a much greater influence for good than they possibly can do when published under the auspices of a comparatively small society. A friend has kindly furnished us with the following report of the second meeting of this Society, recently held in New York:—

The second annual meeting of this Society of American Oculists was held in the city of New York on the 13th and 14th of June, 1865. The President, Dr. Edward Delafield in the chair. Members were present from New York, Philadelphia, Cincinnati, Albany and Boston.

At the morning meeting of the first day, a carefully prepared report of the Committee on the Progress of Ophthalmology during the preceding year, was read by Dr. B. Joy Jeffries of Boston. Papers were also presented on "A Case of Intermittent Ophthalmia," by Dr. Derby, of Boston, and on "Treatment of Purulent and Gonorrhœal Ophthalmia by means of Compression," by Dr. Hildreth, of Chicago.

The evening session was occupied in listening to and discussing a paper on "Specialties and their Relations to the General Practice of Medicine," by Dr. H. D. Noyes, of New York. The Society afterwards received elegant hospitalities, provided by members residing in the metropolis.

On the second day, a large part of the morning and afternoon session was occupied with a discussion of "Asthenopia," which had been assigned as the subject for special consideration at this meeting.

Dr. Dyer, of Philadelphia, exhibited a modification proposed by him of the test lines of Snellen for the determination of astigmatism.

In behalf of the Boston members present, Dr. Williams invited the Society to hold its next meeting in that city on the second Tuesday in June, 1866; and this invitation was accepted.

The subject of "The various operations for Cataract, and their comparative Success," was selected for special consideration at the next annual meeting, and, after the election of new members and the choice of officers for the ensuing year, the Society adjourned.

In the evening, the members were entertained by the President, Dr. Delafield, at his house, and separated, at the close of this very pleasant re-union, highly gratified with all the proceedings of the meeting.

W.

Sudden Death during Labor, reported by Dr. Case.—*Messrs. Editors,*—In answer to a number of letters received from readers of the Journal, I send you a statement furnished me by the physician in charge of Mrs. S., whose sudden death was reported in these pages not long since. The Doctor says :—

"The labor had been progressing slowly and regularly fifteen or eighteen hours, the pains neither severe nor frequent. At the last examination, the os was dilated an inch and a half or two inches. About an hour after this, the membranes were ruptured spontaneously. I was called into the room immediately. She seemed somewhat alarmed at the flow of water, and when I assured her it was all right, she said it was not so in her other labor. The os was well dilated. Soon another pain came on. The head of the child began to descend, the external parts to open, but in an instant it was all over. Her head dropped, the child receded. There was no rigidity of muscle, no pulse—the heart was still—the face purple, as if she had been strangled. There was about the usual amount of liquor amnii. I brought away the child by the feet. The uterus was not ruptured nor placenta detached."

I add a few words in answer to those who have written me on this subject. The patient was of medium size, pelvis rather large, fair complexion, nervous sympathetic temperament. This was her fifth pregnancy. First three times, miscarried from third to fifth month. The fourth time gave birth to a healthy boy, weighing nine pounds. Labor natural and easy, lasting from ten to twelve hours, followed by *chatonné placenta,* which was removed with great difficulty. For many years she had been troubled with a severe cough, and at times there was hæmoptysis, which confined her to her room.

This case has engaged the attention of some of our most eminent physicians, among whom I will mention Drs. De Laskie Miller, Ephraim Ingals, G. W. Bicknell, David Dodge and Orren Smith. Dr. Green's theory of "air in the veins" has its advocates, but I believe the larger number incline to the theory that death was caused by the rupture of some bloodvessel immediately connected with the heart.

Chicago, Ill., June 3d, 1865. M. Wendell Case, M.D.

Operation for Hare-lip, &c. *Messrs. Editors,*—In a recent number of your Journal I observe a suggestion in reference to an improvement in the construction of hare-lip pins, from Dr. S. B. S., of Exeter, N. H. I have no doubt of the utility of what the Doctor suggests ; but at the same time I think my own method of operating preferable.

I have had occasion, within the last ten years, to operate for hare-lip a very considerable number of times, and have invariably used the finest sewing needles that I could obtain. I insert them with a suitable pair of pliers (a great deal better, by the way, than the fingers for this purpose), and take care to make the insertion deep and thorough. After the parts are securely bound with sutures, I cut off both ends of the needles and cover them with adhesive plaster. The children appear to enjoy themselves at the breast as well as before the operation. In every instance in my experience thus far, the success has been perfect, and my conviction is, that every surgeon who gives this

method a fair trial will never after use anything else. I usually insert three needles.

I have also practised the dressing of other incised wounds in the same way, with very satisfactory results. Only yesterday, after the amputation of the mamma, I dressed in this way, because from previous experience I am satisfied of its superiority over the ordinary suture. In securing lacerated and incised injuries of the scalp, there is no comparison between the use of these fine needles and any others I ever saw used. In most cases it is entirely unnecessary to remove any of the hair; and the parts tolerate the presence of the needles much better than they do that of any suture.

Owego, April 4th, 1865. Very truly, &c.,

E. Daniels, M.D.

[The above method of operating for hare-lip is essentially that recommended by Prof. Gross, in his great work on Surgery, as the best. Dr. Gross, however, does not find it necessary to use any plasters.—Eds.]

Boylston Prize.—We are happy to announce that the Boylston Prize for the best dissertation on Recent Advances in Ophthalmic Science, has been awarded to Dr. Henry W. Williams, of this city. For the subjects for next year's prizes our readers are referred to the advertisement in this week's Journal.

The *New York Medical Journal* announces the trial and conviction of Capt. Silas H. Swetland, Commissary of Subsistence Volunteers, charged with the appropriation of public supplies and funds to his own use. The *New York Journal* speaks of him as "one of the leaders of the conspiracy which resulted in the removal of Dr. William A. Hammond from the office of Surgeon-General," and further says that "being at the time an agent for one of the States at Washington, he importuned Dr. Hammond to give him the appointment of Inspector of Liquors for the Medical Department, alleging that the Medical Purveyors knew nothing about this part of their duty. His application was enforced by a document signed by several members of Congress. Dr. Hammond refused to do so for the reasons that no such office was known to the law, and that a system was already in operation, by which all liquors purchased by orders from his office were examined chemically; and that as regarded the others, the Medical Purveyors were as competent to judge of the good quality of all their supplies as was Mr. Swetland. Swetland then went to the Secretary of War with his complaints, and the next that is heard of him is as an agent of the infamous Reeder Commission, searching the hospitals for specimens of bad liquors and medicines. After he had performed what was expected of him in this capacity, he was appointed a captain in the Commissary Department, and ordered to the Department of the South. * * * * By virtue of special orders from the headquarters of the District of Florida, he has been tried upon the charge of 'Fraud,' in support of which sixteen specifications were adduced, all alleging the appropriation of public supplies and funds to his own use. The sixteenth was dropped by the prosecution, but of the remaining fifteen

specifications and of the charge he was found guilty. The following is the sentence of the court martial :—

"'And the court do therefore sentence him, Captain Silas H. Swetland, Commissary of Subsistence Volunteers, to be cashiered, with the loss of all pay and allowances now due, or to become due; to be fined ($5,000) five thousand dollars; to be imprisoned for one year in such prison or penitentiary as the proper authorities may direct; and the sentence to be published as provided in the 85th Article of War.'

"General Gillmore's orders in the case are as follows :—

"'The proceedings, findings, and sentence in the foregoing case having been approved by the officer appointing the court, and submitted to the Major General commanding the Department, the same are hereby approved and confirmed. Captain Swetland ceases to be an officer of the United States from the date of the publication of this order. He will be confined under charge of the Provost Marshal of the District of Florida, until authority is received from the Secretary of War to send him to the penitentiary at Albany, New York, which is designated as the place of his punishment.

"'By command of Major-General Q. A. Gillmore.

"W. S. M. Burger, *Assist. Adjutant General.*'

"The 85th Article of War, referred to in the foregoing sentence, is as follows :—

"'In all cases where a commissioned officer is cashiered for cowardice or fraud, it shall be added in the sentence that the crime, name, and place of abode, and punishment of the delinquent be published in the newspapers in and about the camp, and of the particular State from which the offender came, or where he usually resides; after which it shall be deemed scandalous for an officer to associate with him."

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, June 24th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	38	48	86
Ave. mortality of corresponding weeks for ten years, 1853—1863,	35.1	36.2	71.3
Average corrected to increased population - - - - -	00	00	78.82
Death of persons above 90 - - - - - - - - -	0	0	0

Married,—At Glade Mills, Butler Co., Penn., May 31st, Dr. Charles L. Allen, of Rutland, Vt., to Miss Gertrude Lyon, of the former place.

Died,—In New Orleans, June 2d, suddenly, Dr. Ambrose L. White, in the 62d year of his age.

Deaths in Boston for the week ending Saturday noon, June 24th, 86. Males, 38—Females, 48. Accident, 5—apoplexy, 1—congestion of the brain, 1—disease of the brain, 2—bronchitis, 4—burns, 1—cholera, 1—cholera infantum, 1—chorea, 1—consumption, 12—convulsions, 4—croup, 1—diarrhœa, 1—diphtheria, 2—dropsy, 2—drowned, 2—dysentery, 5—epilepsy, 1—bilious fever, 1—typhoid fever, 3—gastritis, 1—disease of the heart, 5—infantile disease, 2—intemperance, 1—disease of the kidneys, 2—laryngitis, 1—lockjaw, 1—congestion of the lungs, 1—inflammation of the lungs, 3—marasmus, 2—measles, 1—old age, 1—paralysis, 2—premature birth, 1—smallpox, 4—suicide, 2—unknown, 2—whooping cough, 2—wounds, 1.

Under 5 years of age, 27—between 5 and 20 years, 9—between 20 and 40 years, 23—between 40 and 60 years, 14—above 60 years, 13. Born in the United States, 51—Ireland, 23—other places, 12.

THE

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A FEW WORDS ON BANTINGISM AND OBESITY.

BY CHARLES MUNDE, M.D., NORTHAMPTON, MASS.

[Communicated for the Boston Medical and Surgical Journal.]

SINCE Mr. Banting published in England his, I might almost say, undeservedly popular letter on the dietetic treatment of obesity, a number of physicians have written on the subject, and attempted to prove to the public that we did not need Mr. Banting to enlighten us on dietetics, and that we knew everything contained in his letter, long ago, even better than he. Among the numerous, more or less scientific, articles of the kind which I have had occasion to read in different languages, I have, however, found scarcely one which makes the dietetic doctrine more palatable to the non-professional man than does Mr. Banting's letter itself. On the main point they all agree with him, viz., that vegetable diet, containing sugar or starch, produces fat, while animal food does not. From the perusal of all these treatises the public will, therefore, draw no other conclusion than that, in order to become fat, the former, and to become thin, the latter diet is exclusively to be adhered to. To this conclusion I shall now take the liberty of adding a few observations drawn from practical life.

First. In order to remain healthy and vigorous, the system needs for its nutrition a variety of substances, the constituent parts of which resemble, as nearly as possible, those which exist in the body itself. If a person, therefore, use a kind of food, not containing these constituent parts in a correct proportion, of course the nutrition of his body will be performed in an imperfect manner, and he will not only lose flesh, but his health will also suffer, more or less, from such an incomplete regimen.

We therefore not only see those people growing thin who live exclusively on meat, but also those who partake solely of bread or potatoes, notwithstanding the greater proportion of fat-forming ingredients existing in the latter articles. Proofs of this are to be seen in the exclusive vegetarianism of the Hindoos, in the poor German

weavers and other inhabitants of mountainous regions, who rarely see a bit of meat, and in prisoners living on bread and water, notwithstanding they lead a sedentary life, which should predispose them to obesity. In thirty years, during which my sojourn in water-cure establishments has given me ample opportunities for making observations on diet, I have found that the majority of corpulent individuals were great consumers of meat; and in most cases, under a suitable course of water treatment, and by a simple vegetarian diet, with partial or entire avoidance of animal food, I have succeeded in reducing the weight, and at the same time also in improving the general health of the patient. Thus, but a short time ago, a gentleman from St. Louis, under an exclusive vegetarian diet, was reduced in three months from 295 to 225 pounds, while a fat New York gentleman, under a less strict regimen, lost 20 pounds in a fortnight.

Secondly. Nearly all people, or at any rate all who have the means, *eat too much*, and those who live on one kind of food are even obliged to eat too much, in order to draw from their articles of diet, which do not contain the materials composing the body in a correct proportion, a sufficient number of those materials which they would have obtained from a much smaller quantity of mixed food. *He, therefore, who partakes only of one kind of food is compelled to eat more than is healthy for him*, unless he wishes to crave for those substances which his system imperatively demands for the replacement of the daily waste of tissue.

Thirdly. It is a well-known fact, that dogs fed exclusively or principally on meat become diseased about the eyes, as well as in other parts of the body. This is the case particularly with large dogs, when they have little or no exercise. I myself, within two years, have lost two Newfoundland dogs, who had all the physical signs of toxæmia, and who gradually died. In one of them, the first signs of disease appeared in the tail, which lost its hair, became ulcerated and extremely offensive, on which account it was amputated; without relief, however, to the poor fellow, notwithstanding his frequent use of water treatment in the clear mountain stream which flows by my establishment. In the other dog, an abscess formed in the neck, of such size as to make his death unavoidable. No physician will deny that the excessive use of meat will produce also in man a predisposition to inflammatory and putrefactive diseases, inasmuch as he knows that in such disorders the use of animal food is limited or even entirely prohibited. What, then, becomes of the excess of animal food which does not furnish in correct proportion the substances absolutely essential to the nutrition of the body? In my opinion, it produces a diseased condition of the vital fluids, like everything taken in excess, but more so even than a purely vegetable diet. Whether or not this be the case with Mr. Banting, I do not know; I hardly think, however, that he will make an exception to

the rule, and that, sooner or later, if he is inclined to be candid, he may be able to write us a less encouraging letter than the one which gave occasion for these remarks.

Fourthly. An animal diet does not agree with all persons disposed to corpulency. This especially applies to gouty and plethoric individuals, with whom this kind of food and good living generally must be considered as both the cause and the abettor of their ailments. Recent investigations have shown that the nitrogenous aliments (meat) by reason of their imperfect chemical combination with oxygen, are the chief producers of uric acid, which, accumulating in considerable quantity in the blood, causes the characteristic painful attacks, which do not disappear until by a rigid diet, free perspiration, and other excrementitious processes, the system has become rid of the acid. If this theory (that of Liebig and the Vienna school) be correct (and I have found it confirmed by my own experience), then the advice to corpulent persons disposed to the formation of acids, to eat exclusively or chiefly animal food, is a very poor one; for its adoption would make their principal trouble incurable.

Fifthly. If corpulent persons are to be advised conditionally, only, to follow Mr. Banting's example, and if in a country, the inhabitants of which are already inclined to eat much more meat than is good for them, it be a hazardous undertaking to say anything against this particular kind of food, what, then, are those people to do to whom their obesity is not only disagreeable, but also dangerous, especially if there be a predisposition to apoplexy or paralysis? They should eat less and take more exercise, but at the same time adhere to their mixed diet, or, if they be inclined to acidity of the stomach or of the blood, live for a time on a less nutritious, vegetable diet. Such people usually say that they eat extremely little. In most cases this is a delusion, and even those who really eat little, still eat too much—for their particular case. A man cannot grow fat on nothing, and, the less a man eats the less adipose tissue will be produced, even if he be unable to take much exercise. This principle, above all, must be observed by every corpulent person. And if he be able, he should take active exercise, such as walking, swimming, gymnastics, fencing, &c., but especially walking. If this be too much for him, he should ride on horseback or in a carriage, practise calisthenics with dumb-bells, clubs, or, according to Schreber's method, without any instruments. At the same time, the avoidance of the principal fat-forming aliments, such as sugar, starch, butter, milk, and other highly nutritious articles, or, at least, their very moderate use, and, on the other hand, the adoption of a diet of salads, pickles, oranges, apples, and other fruits, and of less nutritious vegetables, without confining himself too closely to them, are circumstances which will materially aid his purpose.

Cold baths, followed by exercise, also diminish the size of the

body, inasmuch as the reaction following them increases the metamorphosis of tissues. If it appear necessary, the temporary administration of some mildly laxative mineral water (Congress water, or a small dose of a solution of sulphate of magnesia, diluted with water) will be of value. However, this should be determined by the scientific and experienced physician, as well as the advisability of a carefully-conducted course of water treatment, during which, however, the patient, probably disposed to apoplexy on account of his obesity, should neither be kept wrapped up in a pack for five hours, nor be plunged head over ears into a cold bath. A sojourn of several weeks, not to say months, in a water-cure establishment is advisable, if for no other reason than for the diet and the exercise in pure mountain air.

Sixthly. A steadfast, firm will, and a manly perseverance, both on the part of the physician, and especially also on that of the patient, are indispensable to an appropriate regulation of the diet and mode of life, generally. "That reminds me of a little story," as our good President Lincoln was wont to say.

A distinguished physician was called into the country to visit a farmer, who, having become wealthy, had, in accordance with his improved worldly condition, gradually accustomed himself to taking more and more of the good things of this life, until, in consequence, he became afflicted with a very inconvenient amount of fat, and with various other ailments, both bodily and mental. After a careful examination, the physician declared that his patient was living too well, and that a gradual return to his former simple and moderate mode of life would remove not only his obesity, but also his corporeal and mental sufferings. Half convinced of the truth of the doctor's advice (although he would rather have swallowed a few doses of medicine), he began to express his doubts as to the feasibility of the plan of gradually diminishing the *quantity* of his food, and his ignorance as to the way of doing it. "How many dumplings do you generally eat?" asked the physician (this happened in Saxony, the land of potato dumplings the size of a man's fist). "Twelve," answered the peasant. "Well, henceforth," said the doctor, "eat but eleven, and have them made a little larger."

Such is, only too frequently, the advice of the physician on the subject of diet. And, even if he give it in a decided and proper manner, the patient will still find means to interpret his words according to the above example; and thus there is no end to the obesity, the pyrosis, the dyspnœa, the troubled sleep, the irritable temper, the complaints, and—the emetics and laxatives.

June 6th, 1865.

MR. SOLLY'S CLINICAL LECTURES ON SCRIVENERS' PALSY.

[Continued from page 201.]

Lecture II.

Gentlemen,--Again returning to the subject of scriveners' palsy, I will relate another case, as it illustrates the main characteristics of the disease very forcibly, and also shows that the malady is more easily cured, when detected early.

Mr. Q ——, aged 25, single. Parents alive and healthy, and on his father's side very long lived; he has a grandmother aged 92. His habits have always been regular and steady, taking beer with his meals, but not spirits. He smokes very little now, and did not smoke at all when he was first attacked. He has been engaged in mercantile business since he was 14 years of age, but previously to going into the —— Bank (which he did about five years ago) he was in a large wholesale house. In this house he had less writing and more active exercise. After he had been in the service of the bank about a year, he complained of an uncomfortable sensation in the upper arm of the right side, but not at first in the hand and fingers. This discomfort was succeeded by violent trembling in the muscles and tendons of the hand and arm, accompanied by a sensation of extreme fatigue in the limb, as if he had been using some violent physical exertion, rendering the arm and hand completely numbed. This numbness was so complete that he could pinch and prick the fingers without feeling anything. At last it became so bad that he could not hold his pen. When these symptoms first commenced they would all retire at night, and, with rest and sleep, he would feel pretty well in the morning; but ere long even this relief was denied him, and he commenced business in the morning with some discomfort. When, at last, the handwriting became so bad that he was ashamed of it, he sought my advice.

I recommended a complete change of air and scene, which through the great kindness of those who claimed his services, he was enabled to effect. After the lapse of two months away from his writing occupation, during which time he was benefiting by the bracing sea air and bathing at Brighton, he almost entirely recovered. Since that time (beyond an occasional return of the symptoms in a mild degree, after using the pen without cessation for any lengthened period) he has not experienced sufficient inconvenience to lead him to fear a return of the disease. He has not so much writing to do now as formerly, and writes an excellent hand without difficulty.

The next case does not tell much for our medical treatment of such cases, though it shows that with rest they will recover. I have no doubt that the pen he speaks of was of service, but I do not believe that it would have effected a cure if it had been alone employed in the first instance. Coming after the rest, the pen was certain-

ly of use. This patient shall tell his own story in his own words, which are:—

"I entered the service of the —— Bank in November, 1859. About the middle of 1860 I began to experience an involuntary pressure of my thumb upon the pen while writing, which increased until it was so violent as to be very painful, and I was compelled to hold the pen with my fingers, without using the thumb. The thumb then doubled itself into the palm of the hand, causing much pain. These sensations were experienced only while writing, or when holding any article between the finger and the top-joint of the thumb. At this time I was at ——, in Essex, and I sought the advice of a surgeon, who gave me a liniment; but this not proving efficacious, I went to another, who also gave a liniment, and advised me to hold my arm under a stream of cold water, and have it rubbed with the hand in a brisk manner. This was done twice a day for some time. In November I was removed to the head office, and I cannot remember whether it was before or after this that my thumb so far improved that I could hold the pen with my fingers without the contraction of the thumb upon the palm before complained of.

"On Feb. 21st, 1860, I first sought your advice in the matter, when you advised me to write as little as possible, and gave me a prescription [this was the third of a grain of strychnine], stating my case to be an attack of scriveners' palsy in a slight degree. On the 25th you increased the dose [to the sixteenth of grain], and directed me to leave off writing for a fortnight. This medicine caused twitchings of the muscles of the face, and on April 5th you gave me another prescription [the twelfth of a grain of the bichloride of mercury]. On the 16th of April you advised me to try galvanism, and by the kindness of Mr. Wood, of Cheapside, I was allowed to go to his shop and have the use of one of his instruments for a fortnight to try its effect. At first it appeared beneficial, but the effect was not permanent.

"During this time I had been writing with my left hand, but I began to feel an unpleasant sensation in my left arm, and you advised me that I must discontinue it.

"On May 9th you gave me small doses of colchicum, and on the 28th tincture of iron. The latter, however, I did not use, as I left the bank on the 31st, and went to my home in the country.

"In July I started on a voyage to the Canary Islands, the journey out and home occupying six weeks. This did not appear to produce any especial good at the time, but I think it had a beneficial effect upon my general health.

"I re entered the service of the bank in September, taking a post requiring but little writing; and in the same month I attended an
ædic hospital, and was seen by Mr. —— and Mr. ——. One
e thought the extensors were withered, but the other differed
n. I was put under the care of Mr. ——, and various trials

were made of a spring fixed on a glove, intending to prevent the thumb from contracting. But no success attended these efforts, and in January, 1862, I ceased my attendance.

"In February, I purchased Perry's 'Orthodactylic' penholder, the peculiarity of which consists in three small plates affixed to the holder in the places where the thumb and fingers should rest. About this time my thumb rapidly improved, and in March I was able partially to resume my duties at the books. In April, 1863, I re-entered upon full duty at the desk, since which time I have experienced no inconvenience from the usual labors of the office. [He now writes an admirable hand.]

"A medical gentleman suggested to one of the clerks that the disease might perhaps be caused by the contact of the thumb with the steel pens which are used in the office (Mitchell's barrel pens); and since then I have used a quill over the barrel of the pen as a protection, and others of the clerks tell me that they have derived benefit by doing the same.

"*Note.*—My habits have always been quiet and regular; no smoker; a teetotaller. In youth I grew fast, and was of not very robust health, though not subject to very severe illness. My father was afflicted with nervousness; mother healthy.

"C. W——. Dec. 14th, 1864."

Very little has been published on the pathology of this disease in the English language. Virchow,* in his handbook of special pathology and therapeutics, has an article upon it; but this, unfortunately, throws no light upon the treatment of this formidable disease. He confirms my opinion that the act of writing is dependent on the co-ordination of several muscles: saying, "Notwithstanding the combinations necessary for this purpose become by degrees so habitual that a conscious separation of the single acts is not possible to the mind, it appears as if the rhythm of it, as it is learnt with difficulty, yet it in no way approaches the proper automatic movements—such as breathing, &c. Writing requires always a constant attention, which becomes more or less mechanical." This author, also, refers to an irritability of the upper dorsal region of the spine, sometimes induced by over-practising on the pianoforte, as indicated by pain in that region and morbid contractions of the fingers. I have seen such cases, and may mention, as a digression from our consideration of its pathology, that I always prescribe nervine tonics and rest from that kind of action of the muscles—but not entire rest of the limb; active exercise in the open air, with a hoop where it is possible, and calisthenic exercises of all kinds.

This aching in the spine may also be observed in connection with scriveners' palsy; and the fact is important, as I shall explain further on. Very little consideration of the subject of scriveners' pal-

* Virchow: Handbuch der Speciellen Pathologie und Therapie, vol. iv., p. 142.

sy is needed to convince us that the disease is not a simple paralysis of muscular power. The patient can call all his muscles into action; but he cannot bring them all into such *harmonious* action as to be able to write. What is the reason of this? I must not, even in a clinical lecture, take it for granted that you are all well up in the physiology of the brain and spinal cord, and I am sure I need not ask forgiveness of those who are, if I go a little into the A B C of the matter.

The physiological and pathological explanation of this disease is not given by Virchow. It must be sought in the newest discovered mines of nervous lore. I believe that I was one of the first to insist upon the distinct office of the cineritious and medullary neurine, and I felt that this was the more necessary, inasmuch as Gall and Spurzheim, those grand pioneers in nervine anatomy and physiology, omitted to adopt this view. They merely spoke of the cineritious neurine as the womb or producer of the white, not, as is now universally acknowledged, the real and sole source of power. Much has been discovered lately in regard to the physiological action of this gray neurine—the vesicular portion of the nervous system, and its relation to the tubular, especially as regards the spinal cord. The spinal cord, as I suppose most of you know by this time, is not merely a large nerve or large bundle of nerves—in other words, it is not merely a conducting instrument. It consists of the two kinds of neurine, the tubular or conducting neurine and the vesicular or dynamic neurine; the white or tubular neurine, the gray or vesicular neurine. I remember when Marshall Hall first enunciated his views and discoveries regarding the especial power of the spinal cord in the production of what he called its excito-motory power, I said, "Well, if you are right, the instrument of that power is the grey matter of the cord." To which he replied, "I know not at all what is the instrument of that power, or in what part of the cord it is developed; I only know of its existence, and that I have proved." Since then the grey matter has been proved to have that function, but it has been proved to have another distinct from it. It is this power and the machinery of it, so to say, that you must understand, if you do not do so at present, before you can understand what I believe to be the physiology and pathology of scriveners' palsy.

Ever since the days of Hippocrates it has been known that if the fibres of the brain are torn through by an irruption of blood into their substance, the communication by which the will flows to the muscles is cut off, and the muscles supplied by such fibres are paralyzed. Until a very late period, it was supposed that the cerebrum and the tubular fibres of the spinal cord were the only instruments concerned in producing the action of muscles. Latterly, however, the physiologist has felt convinced that there must be some additional instrument concerned in the transaction; some instrument for co-ordinating or combining the action of muscles. The cerebellum

has now, by almost universal accord, a portion of this power attributed to it. Schroeder Van der Kolk does not consider that all the credit is due to the cerebellum, but that the vesicles of the cord also have their share in it. I confess that I think so too. The exact proportion in which this power of co-ordinating muscular action is possessed by these centres, I suppose no one will at present pretend to decide. I expect that morbid anatomy, unveiled by the microscope, will clear up a great deal that is yet obscure. Romberg, who gives a short notice of writer's cramp in his work,* mentions a fact which shows that it may take its origin in the cerebellum:—"Paralysis of the upper extremity, dependent on a cerebral or spinal affection, frequently commences with impaired power of conduction in the motor nerves of the fingers, and consequent difficulty of writing. A man was under my care whose disease lay in the cerebellum, and made its *debut* with an impairment in writing." It will only be by the accumulation of such facts that the mystery will be unveiled.

In the present state of our knowledge of the symptoms which attend scriveners' palsy, I think we are justified in believing that the disease commences in the cord. We find that most of the patients have felt some uneasiness in the lower part of the cervical region and in the upper part of the dorsal. There is seldom any complaint of discomfort in the head, either in the occipital region (the seat of the cerebellum), or in the frontal. Still it must be allowed that the whole question of its pathology is very much in the dark, though I hope before long a *post-mortem* examination may help us out of our dilemma. Without, therefore, now attempting to decide whether the nervous power which co-ordinates the muscles of the writer resides in the cerebellum or the spinal cord—though I am inclined to favor the latter hypothesis—we will consider the nervine arrangement by which it is in all probability produced; and though I shall describe it as existing in the spinal cord, still there is no reason to doubt that to a certain extent the same physical arrangement exists in both dynamic centres.

Lockhart Clarke and Schroeder Van der Kolk were, I believe, the first to explain clearly the nervous mechanism, if I may so express it, by which a group of muscles are made to act in such unison that complicated actions are produced in perfect harmony. The first-named gentleman originally demonstrated the actual connection of the nerve tubules with the nerve-vesicles. Schroeder Van der Kolk followed it up and reasoned upon it.

We are so accustomed to see all muscular actions harmonious, that we neglect to consider the means by which this result is obtained. Let us consider the act of volition, and how it is carried out. I will state the matter briefly and dogmatically. Will springs from

* Manual of the Nervous Diseases of Man. By M. H. Romberg, M.D. Translated by Dr. Sieveking for the Sydenham Society, vol. i., p. 321.

the action of the hemispherical ganglion or cortical substance of the hemispheres of the brain. It descends along the white fibres of the hemispheres through the corpus striatum, crura cerebri, pons Varolii, and medulla oblongata, where it crosses from one side to the other, and then descends in the cord to the vesicular neurine in the interior of the medulla spinalis. Now I must have recourse to a diagram on the black-board. You will see by this diagram that I represent a nerve-fibre coming down from the brain, joining the nucleated vesicles, those ministers of power in the substance of the cord, the cineritious neurine. I think it right to repeat these terms frequently in order that they may be household words engraved on the tablet of your memory. From these vesicles you see other and more numerous nerve-tubules arising; these go to all the numerous flexors and extensors of the hand, which produce the act of writing. If the nerve-tubes went directly from the cord to the muscles of the hand, those muscles would act, but they would act spasmodically, not harmoniously. The instrument, then, which produces all this harmony, which co-ordinates the muscular action necessary to writing, whether good or bad, are the nucleated vesicles. It is no sound argument against this theory that the act of writing does not come by instinct, like the acts of the lower animals, but that the child has to learn to write—in other words, that these vesicles have to learn their co-ordinating duties. Is it not so with the brain itself? The child cannot reason and think accurately as soon as it is born. The ganglionic cells of the hemispherical ganglia have to be educated just as much as any other part of our living mechanism.

The observations of Schroeder Van der Kolk, to which I have referred, are given by him in the work published by the Sydenham Society, and translated by Wm. Davies Moore, Esq., M.B.* As I hope you will all take the first opportunity of reading this admirable treatise, I shall not give the author's words at length.

The main point on which you should have a clear idea is this:—That the nerve-fibres which you trace with your dissecting knives into a muscle or group of muscles, do not spring directly from the brain, or run without interruption from it. These nerve-fibres spring from "a group of mutually connected ganglionic cells, which cells receive the impressions of our will along the anterior white columns." These impressions or stimulations being thus distributed uniformly over all the cells of a group, produce in all the motor filaments of a nerve arising from this group a uniform and simultaneous action.

The number of these anterior conducting filaments of volition must thus be proportional to the number of the group of cells, and the several combinations of which they are capable. The greater size of the anterior gray cornua in the cervical and lumbar enlargements of the spinal cord are accounted for by this fact.

* Professor S. Van der Kolk on the Minute Structure of the Spinal Cord and Medulla, &c., p. 81.

If we accept this view of Schroeder Van der Kolk of the anatomy and physiology of the spinal cord, confirmed as it is by the earlier and later descriptions of Lockhart Clarke, we are, I think, justified in believing that the writer's palsy must depend upon the disturbance or actual disease of these spinal cells. I must not, however, enter upon this part of the subject in this lecture, but reserve it for the next.—*London Lancet.*

[To be continued.]

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

MAY 8th.—*Hermaphrodite Pig.*—Dr. J. WYMAN exhibited and described the sexual organs of an "hermaphrodite" pig. The pig was about six months old, and outwardly had, in addition to the vulva of a sow, a testis on either side. The following condition of the genital apparatus was shown on dissection:—

1st. Two well-developed testes, and to each there was an epididymis, ending in a vas deferens following the usual course, and a vesicula seminalis.

2d. A two-horned uterus of a somewhat small size, its muscular coat very imperfectly developed; the cornua arched to the right and left, and accompanying the vasa deferentia passed out of the abdominal rings, gradually contracted to a point without an opening, but were attached to the epididymis by a slender ligament.

3d. The uterus and urethra opened into the vagina, one behind the other, at the same point, at which also ended the vasa deferentia, the orifices of these being in the septum between the uterus and urethra; the vesiculæ seminales were attached to what might be called the neck of the uterus.

4th. The urethra was prolonged by two folds of mucous membrane a short distance on the anterior wall of the vagina, but after this there was no distinction between the genital and urinary passages.

5th. The vagina was muscular and thick, opened outwardly by a small orifice at the vulva. The penis was about four inches long, crooked and attached by two crura to the pubes; it ended at the vulva, from which it slightly projected.

6th. Two Cowper's glands existed, and were covered by a thick muscular bag.

This kind of monstrosity is rare in pigs, but is not uncommon in goats.

In such cases as the above, the co-existence of vasa deferentia and vesiculæ seminales with the uterus, show that their different parts are not one and the same morphological structures.

The uterus, with its cornua ending in a blind point, may be considered as a persistent condition of the ducts of Muller, which have grown to a large size, their free ends not having opened into the peritoneal cavity.

There were neither ovaries not prostate gland.

May 22d.—*Encephaloid Disease of the Stomach.*—Dr. Jackson showed a cast in plaster of the organ, and gave the following history of the case, which he had received, with the specimen, from Dr. H. E. Davidson, of Gloucester:—

Mr. R., æt. about 53 years; engaged in the fishing business, and enjoyed good health until about two years before his death. Earliest symptoms were pain in epigastrium, coming on about two hours after eating; occasional vomiting; torpor of bowels.

Sept. 1, 1863, Dr. D. was called in the night; pain in stomach very severe; and had vomited several times; relieved by an opiate. From this time his health steadily declined. In the spring of 1864, he was much depressed by the loss of his wife. During the summer he attended somewhat to business, but could do no manual labor.

Oct. 10th, 1864, Dr. D. was called to attend him. Found him much emaciated, anæmic and sallow. Had not left his house for some weeks, and kept the recumbent position most of the time. Could keep nothing solid upon his stomach, and was using milk, which caused less distress than any other food. Had much dizziness on standing. Bowels very constipated; great distress with dejections, and often followed by blood. On examination, the abdomen was found quite flattened. To the left and a little above the umbilicus, a tumor, of the size of a large hen's egg, was quite evident; and pressure upon it caused uneasiness. All the rational signs clearly pointed to obstruction of the pyloric orifice of the stomach, probably from malignant disease, as the cause of the symptoms; and, although the tumor did not occupy the position of the pylorus in its normal condition, I could rather suppose a dislocation of this portion of the stomach than attempt to explain the case in any other way.

From the above date until his death, which occurred on the 28th of March, there were no new developments, nor was there ever any sudden change. The anorexia was complete, and no food was taken, excepting milk. The pain required the sulphate of morphia in increasing doses. Constipation continued, and was the occasion of much distress.

On examination, the stomach, and to some extent the pancreas, were the only organs diseased.

Mr. R. has had relatives die of cancer, but neither parents, brothers nor sisters; one uncle, over 70 years of age, has now cancer of the nose.

Dr. J. described the disease as a well-marked, soft encephaloid, involving the whole circumference of the stomach, and extending from the pylorus about four inches; well defined, quite thick, and rough upon the surface.

He had taken a cast of the specimen on account of the situation of the disease. Except in a very few cases, in which it was situated at the cardiac orifice, he had found it, almost without exception, in the small curvature, and about midway between the two orifices; as a defined, elevated, circular mass, three or four inches in diameter. This, Dr. J. remarked, is a very important pathological fact, if it is the rule and not the exception, as it explains the remarkable want of correspondence of the symptoms, if not the latency of the disease, that is not unfrequently observed in this form of cancer. In "scirrhus," on the contrary, the disease is found to affect the pyloric portion of the

organ, as in Dr. Davidson's case, and the symptoms are accordingly urgent; the parietes of the organ are disorganized throughout their entire circumference, and cannot contract upon and carry forward the contents into the duodenum.

In regard to the situation of the tumor in Dr. D.'s case, Dr. J. remarked that it certainly was not where we would naturally expect to find it. Many years ago he spoke to Dr. James Jackson of a case of scirrhus of the stomach, in which the tumor was upon the left of the median line; and Dr. J. referred him to a small monograph upon the subject of this disease, by Chardel, a French author, and in which this fact of the situation of the tumor upon the left side is spoken of. Since that time Dr. J. has particularly observed the situation of the tumor in this form of cancer, when one existed, and he has never found it upon the right side, but always upon the median line if not upon the left side; in one case it was so far to the left side that it could not be felt, unless the patient lay upon the right side, so as to cause the diseased organ to be drawn out from the left hypochondrium. This, again, is an important diagnostic fact, if it is the rule and not the exception.

June 12th.—*Laceration of the Uterus.*—Dr. Wheeler reported the following cases:—

"A few weeks since I saw, in consultation, a woman with a deformed pelvis, about 32 years of age, and at the close of her fourth pregnancy. Her first labor was difficult and lingering, and she was delivered with forceps; child stillborn. Her second was premature, less severe; a small child, which with difficulty lived. In her third pregnancy the child was large, labor difficult and tedious. She became exhausted. I perforated the head, and delivered the child with the blunt hook. In her fourth and present labor, when I saw her, she had been about twelve hours in severe pains, with a prolapsed umbilical cord, which had ceased to pulsate. The attending physician left his patient only a few minutes to obtain his forceps, when she experienced a sharp tearing pain in the upper part of the uterus, followed by nausea and faintness. The pulse was feeble and fluttering. Symptoms of general collapse supervened, with the cessation of all uterine action. I ordered stimulants, and found the child had not escaped into the abdominal cavity. The cord had receded, and the head was not engaged in the upper strait. I at once perforated, and delivered with the blunt hook. The placenta was readily removed, with little or no hæmorrhage. The patient gradually came up from the collapse, and a slight reaction came on, with tenderness over the uterus, and a tympanitic condition of the abdomen, followed by nervous excitement and slight delirium. Death took place in about forty-eight hours after the accident. We could obtain no autopsy, but from the previous history of the patient, the contracted pelvis, the present symptoms, and the subsequent termination of the case, there could be no doubt as to the probable laceration of the walls or of the peritoneal covering of the uterus.

"I met with another case of laceration of the uterus, in which the child escaped into the peritoneal cavity, a few years ago.

"The patient was a young, healthy woman, about 25 years of age, with full muscular development, but with a contracted pelvis. She had reached the end of her first pregnancy; the labor-pains had been

continued, severe, and somewhat irregular for a period of six or eight hours. The vertex presented, but only a portion of puffy scalp was engaged within the upper strait.

"During a severe uterine effort, the patient exclaimed, 'something was tearing within her stomach.' She suddenly became pale, and almost pulseless at the wrist, with a death-like appearance of the face. All uterine action ceased. The head receded, or was not to be found in its former position, for the child had escaped into the abdominal cavity, and could be readily felt beneath its walls. From the shock, with the loss of blood, the patient survived only about thirty or forty minutes after the rupture took place. An autopsy, some twelve hours after death, revealed a perfectly healthy uterus, partially contracted down upon the placenta. Also, there was found quite a large transverse fissure in the wall of the left side of this organ. The abdominal cavity contained a large child, with several coagula of blood; which accounts for the sudden termination of the case. The antero-posterior diameter of the superior strait was narrowed to a mere fissure, hardly sufficient to pass the hand.

"Obstetrical authors give directions 'to pass the hand into the womb, through the rent, and to seize the feet and forthwith deliver.' This is a procedure more easily described than performed. For even in a well-formed pelvis, with an uncontracted uterus, and all other circumstances favorable, it must require skill and boldness. In this case, the Cæsarean section was the only alternative and the forlorn hope of saving the child; but time, as well as the friends of the patient, failed to give consent for the operation."

June 12th.—*Voluntary Dislocation of the Hip.*—Dr. Hodges showed some photographs of a man who was able to partially dislocate his hip at will, which were sent by Dr. Lyman, with the following account of the case:—

"John B. Parker, Private, Co. H, 148th N. Y. Vols., on the march from Bermuda Hundred to Drury's Bluff, May 13th, 1864, while skirmishing up a hill, sprang back suddenly, to avoid the gun of a comrade in advance. His left foot became entangled, and his weight dislocated his hip. He felt the injury, and supposed the joint was out. Some comrades pulled it in. He immediately resumed his skirmishing, and marched seven miles—from 10 till 6, P.M. He laid down at night, and went on duty the next day—sharp-shooting, crawling all day. He continued this kind of work five days, and returned to camp, when he was immediately put on entrenchments, and worked two days and nights. Afterwards he went on picket, and entered the hospital May 28th.

"He is able at any time to luxate the hip-joint, and does it by pressing the foot on the floor, to fix it firmly. He then contracts the adductors, throwing out the pelvis, when the head leaves the socket and goes on the dorsum."

June 12th.—*Hydrocephalus.*—Dr. Storer showed the photograph of a hydrocephalic child, and read the following letter descriptive of the case:—

New Orleans, La., May 11, 1865.

"Dr. D. H. Storer.—Dear Sir,—I send to your care, for presentation to the Boston Society for Medical Improvement, a photograph of an interesting case of hydrocephalus internus, which came under my notice here.

"The child, a female, is of Creole origin, in this city, with no black blood in either parent. The mother, young and healthy, has had one other child, healthy, which died young of some of the ordinary diseases of infancy. The father is also healthy, and was drafted and held to service in this city. There was nothing singular in the gestation, and nothing abnormal during parturition. Soon after birth the head began to enlarge, and has continued to increase, till, on April 30th, 1865, at the age of eleven months, the circumference of the head was 32 (thirty-two) inches. The child has four teeth, sucks and sleeps well; she is rather small of her age, tolerably lively, and seems to thrive well. Whether there be any affection of vision or hearing, or of the other senses, has not yet been ascertained.

"I shall watch this case with interest, and hope to obtain for the Society a *life-size* photograph of the head. I think already the circumference is among the largest on record, and it seems to be increasing. Yours truly, SAMUEL KNEELAND."

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JULY 6, 186

THE CITY REGISTRAR'S REPORT.—By far the most valuable annual document published by the City is the little pamphlet containing the Registrar's Report of the Births, Marriages and Deaths, and yet it is not generally distributed, and seldom receives that attention from the public which it deserves. To all who are interested in the growth and sanitary condition of our city, it presents facts and suggestions of the greatest importance, and which demand some other consideration from the body to which they are addressed than the usual vote of "laid on the table and 500 copies ordered to be printed."

For the last two years we have called the attention of our readers to the diminution in the number of births since the war began; this year the change is still more apparent. In 1861 the number of births was 5,789, 5,258 in 1862, 5,255 in 1863, and 4,992 in 1864, or 263 less than those of the preceding year, and 287 less than those of 1850, when the population was only 136,000. Comparing this number with the 4,787 deaths of last year, we find that the population of the city has been increased by birth during the year only by 205. Of these births but 32 per cent. of the fathers were native-born, and in Wards 1, 3, 4, 5, 6, 7 and 8 the number of births was, as usual, exceeded by the number of deaths. The number of colored children born was 15 less than the preceding year, whereas there were twice as many marriages and three times as many deaths as births among this class.

The number of marriages during the year was 2,736, an increase of 414 over 1863. Of the grooms but 302 were born in Boston, while 1,396 of the same were foreigners.

The mortality during the year was 5,111, or one in 37·17 of the population, an increase of 412 over 1863, and 991 above that of 1862. This, as in previous years, is an unfavorable result when compared with the cities of New York and Philadelphia, both three or four times

larger than our own, for the percentage of the former was 35·49, and of the latter 35·26. Table VIII., which exhibits the sex and age of those who died, illustrates in a very striking manner the greater longevity of females, if arranged in the following manner :—

	Males.	Females.		Males.	Females.
Under 1 year,	558	517	40 to 50	240	166
1 to 5	601	515	50 to 60	189	138
5 to 10	134	136	60 to 70	147	143
10 to 15	45	43	70 to 80	86	121
15 to 20	72	72	80 to 90	32	64
20 to 30	285	263	90 to 100	7	15
30 to 40	269	253	Total,	2,665	2,446

The causes of death are thus stated :—Accidents, 190 ; abscess, 16 ; apoplexy, 63 ; anæmia, 12 ; aneurism, 4 ; amputation of thigh, 1 ; asthma, 8 ; bowels, inflammation of, 45 ; do. disease of, 13 ; brain, inflammation of, 45 ; do. congestion of, 79 ; do. disease of, 138 ; bronchitis, 122 ; bladder, disease of, 8 ; blood, disease of, 5 ; bone, disease of, 2 ; cancer, 50 ; cholera infantum, 268 ; cholera morbus, 15 ; colic, 2 ; consumption, 859 ; convulsions, 176 ; croup, 169 ; cyanosis, 14 ; debility, 41 ; diabetes, 3 ; diarrhœa, 140 ; diphtheria, 118 ; dropsy, 112 ; do. of brain, 174 ; dysentery, 104 ; dyspepsia, 5 ; epilepsy, 11 ; erysipelas, 40 ; exhaustion, 13 ; fever, bilious, 9 ; do. scarlet, 225 ; do. typhoid, 107 ; do. typhus, 10 ; gastritis, 13 ; gangrene, 14 ; gravel, 2 ; hæmorrhage, 33 ; heart, diseases of, 142 ; hernia, 2 ; hip, diseases of, 5 ; homicide, 10 ; infantile diseases, 74 ; inflammation, 6 ; insanity, 12 ; intemperance, 55 ; kidneys, diseases of, 43 ; liver, diseases of, 35 ; lockjaw, 2 ; lungs, inflammation of, 292 ; do. congestion of, 90 ; do. diseases of, 13 ; lupus, 1 ; malformation, 12 ; marasmus, 119 ; measles, 46 ; neuralgia, 3 ; old age, 79 ; ophthalmia, 2 ; paralysis, 63 ; peritonitis, 25 ; phlebitis, 1 ; pleurisy, 12 ; premature birth, 49 ; puerperal disease, 36 ; purpura, 7 ; prostatitis, 1 ; rheumatism, 13 ; scrofula, 26 ; skin, disease of, 4 ; smallpox, 113 ; sore throat, 32 ; spine, diseases of, 11 ; stone, 2 ; suicide, 13 ; sunstroke, 3 ; syphilis, 14 ; stomach, diseases of, 9 ; teething, 18 ; thrush, 5 ; tumor, 12 ; ulcers, 2 ; uterus, diseases of, 9 ; unknown, 87 ; whooping cough, 26 ; wounds (gun-shot), 7.

The concluding part of the report is given to a consideration of the rapidly increasing infantile mortality of our city, and Mr. Apollonio deserves the thanks of the community for the pains he has taken to lay this important matter before the public. It appears by the table he furnishes, "that in only one year—1837—did the mortality among children under one year approach the ratio of deaths at the same age at the present time. In 1819, 1822, and 1823, the deaths of children of that age were less than five per cent of the whole mortality of each of those years respectively. From 1840, the ratio, with occasional variations, has been gradually increasing, until, at the present time, it amounts to more than 21 per cent. Can there be any satisfactory reason assigned for the fact, that in a series of years, from 1819 to 1825, the ratio of deaths of children under one year should be as low as 4 18 per cent (and never reaching 10 per cent), while in 1864 it should exceed 21 ?"

"This feature is not peculiar to Boston, but is witnessed, to a greater or less extent, in all populous cities. So common and unvarying

has been this great mortality among children, that the impression has become very general that the result is not an unnatural one, but is what might be reasonably expected. If a reason were asked for this popular impression, something would be said regarding climate, exposure, heat, cold, cleanliness, &c., but accompanied with such a manifest unacquaintance with the whole subject as to startle every one who sincerely believes that no necessity exists that 43 per cent of the deaths should be of children under five years of age. There has long been much speculation regarding this lamentable waste of life, and, as might have been expected, great diversity of opinion has prevailed. Differences have not been so great regarding its proximate causes as its remote, or superinducing ones. At the same time, with all this diversity, so fully and freely expressed, little of a practical character has been suggested as a remedy. In the mean time, the fearful mortality continues, year after year, eliciting, with equal regularity, the same wondering remarks, followed, in the same manner, by general indifference and forgetfulness.

"A glance at the tables in this Report will show that the excessive mortality among young children occurs in overcrowded and badly ventilated houses, or in neighborhoods where little or nothing has been done to ensure proper drainage, cleanliness, and a sufficiency of light and ventilation.

"Light, air and cleanliness are the three great conservators of health. The absence of either causes disease, and, sooner or later, death. The means or methods by which a proper distribution of these three great elements of life shall be effected, are of the first importance, and should receive the most considerate attention from those to whose hands is entrusted a work which so deeply affects the moral and physical well-being of a community. The clearer this fact is seen, and the more fully it is appreciated, the more thorough and complete will be the machinery put in motion to insure the desired result.

"The tenements occupied by a large portion of the population, constructed as they are in localities the least favorable for health and comfort, and designed, it would seem, mainly to produce the greatest possible income, at the smallest possible outlay, are little better than so many pest houses. Very many of them seem to have been planned with a view to keep out both light and air, and are, moreover, so crowded with human beings as to render cleanliness almost an impossibility." * * * * * * * * * *

"Indeed, it would be difficult to exaggerate the dangers that surround those who are compelled to inhabit abodes where they are obliged to breathe, over and over again, the same impure and fœtid air. It can surprise no one, who will take the trouble to reflect, that these places should furnish such abundant harvests of death. Exposed from the earliest infancy to an impure atmosphere, where they contract habits that naturally grow out of, and thrive in such condition, it need not surprise the most careless thinker that children thus born, and thus existing, should die before they had barely begun to live.

"The question now arises, Is there a remedy for this shocking state of things? and if so, What is it? It seems there is but one answer to these questions. Not in education, which some appear to consider as the great panacea for all the 'ills that flesh is heir to;' not in in-

structing, merely, those who are the greatest sufferers, by demonstrating to them that disease and death inevitably follow a persistent disregard of the laws of health; for such attempts will result as similar attempts have always resulted, in perfect indifference and apathy. The answer is, in a *rigid oversight and control of the erection of all dwellings.* It may be a question in the minds of some, how far public authorities may intervene in such a matter; but surely no principle is better established, or more strongly fortified by safe precedents, than that all private rights and privileges may be subordinated to the public weal. In other words, the State may, for its own safety and welfare, employ whatever means may seem best calculated to secure that end. In accordance with that right, she puts in operation the most elaborate and costly educational machinery, and requires that the child shall use it, not, indeed, solely for the individual benefit of the child, but for the good of the whole community, of which the child forms a part—wisely considering, moreover, that it is far cheaper (apart from the moral side of the question), to build schoolhouses than prisons and penal institutions. By the same right towns and cities invade private interests to open highways and streets for the public good, abate nuisances, remove persons infected with contagious or dangerous maladies, require the walls of buildings to be of proper strength, and constructed of suitable materials. Now, it would not be an indefensible exercise of this right, if one further step were taken, so that, hereafter, no dwelling-house should be erected unless furnished with means of ventilation, and provided with proper drainage.

"That the large mortality among children is primarily owing to causes alluded to above, there can be little reasonable doubt; and until such or similar means are employed to remedy the evil, no State or city, in which such a condition of things exists, fully performs its whole duty to its subjects. On economic grounds alone, every healthy person, as consumer and producer, adds so much to the material wealth of the State; and by parity of reasoning, the death of one such person is, to that extent, a subtraction from its wealth. Every child until old enough to work, is simply a consumer, and adds but partially to the aggregate wealth. It is, therefore, of the first importance that he should live and become a producer also."

Foreign Medical Intelligence.—Prof. Virchow states, as the result of the official examination of swine's flesh in Brunswick, that 12,747 hogs were inspected between Dec. 1st, 1863, and Dec. 1st, 1864, and only one of the number was found to be infected with trichinæ. Since then nearly 7,000 more have been examined, and another was found to be highly trichinous.

The disease of the Crown Prince of Russia was pronounced by Rayer and Nélaton, of Paris, to be rheumatism of the muscles of the back; but Prof. Oppoltzer, of Vienna, who was called to Nizza to attend him, diagnosticated cerebro-spinal meningitis, and the *post-mortem* examination, which was made by Pirogoff, fully corroborated the correctness of his opinion.

A severe outbreak of dysentery has recently occurred in a county

asylum in England, caused by the effluvia from a field irrigated by sewage. The poison had a period of incubation in most cases before the dysentery appeared, of from three to five days. The morbid appearances most characteristic of this epidemic were—1st, a soft, membranous deposit on the mucous membrane of the intestines; and 2d, the diseased condition of the lower part of the small, as well as the large intestine in all the cases.

Dr. Bence Jones, in a lecture recently delivered at the Royal Institution, says there are good grounds for believing that there exists within us, in addition to the mechanical or animal circulation of the blood, another, and a greater and more strictly chemical circulation, closely resembling, if not identical with, that which obtains in the lower divisions of animals and in vegetables. A circulation in which substances continually pass from the outside of the body into the blood, and through the blood into the textures, and from the textures either into the ducts, by which they again pass into the blood, or are thrown out of the body; or into the absorbents, by which they are again taken back into the blood, again to pass from it into the textures.

M. Bouchut has recently read a paper at the Academy of Sciences, in which he gives an account of the application of the ophthalmoscope to the diagnosis of chronic hydrocephalus in young children. In this disease the circulation and nutrition of the eye undergo notable modifications, in consequence of the cerebral compression produced by the presence of fluid. When a patient was examined, the following changes in the eye were observable:—1. An increase in the number of the veins of the retina, which retain their usual color. 2. Sometimes a serous peripapillary infiltration. 3. Atrophy of the papilla and optic nerve. 4. Atrophy of the retina and choroid coat. In rickets, however, which often produces a large increase in the size of the head similar to the commencement of hydrocephalus, none of the foregoing alterations in the eye are to be found.

The tinctorial power of the salts of magenta is something marvellous. Mr. Field stated, in a recent lecture at the Royal Institution, that no dye he had examined, whether from the animal, vegetable or mineral world, could bear comparison for one moment with this crimson color obtained from aniline. One grain in a million times its weight of water gives a pure red; in ten millions, a rose pink; in twenty millions, a decided blush; and even in fifty millions, with a white screen behind the vessel in which it is dissolved, an evident glow.

In a recent number of the *Annales d'Oculistique*, Dr. Sichel has a paper upon amaurosis produced by tobacco-smoking. Few persons, he says, can continue to consume daily more than twenty grammes of tobacco without their vision or memory becoming impaired. The fumes of tobacco appear to act on the brain and on the origin of the optic nerves, thus producing passive chronic congestion, not very intense, but persistent and very obstinate. There are many smokers who may resist these effects for a long time, and the same can be said of other narcotics; the pernicious consequences, however, though slow in manifesting themselves, are none the less certain.

Use of Opium in the United States.—A writer in the New York *Journal of Commerce* has been making some investigations into the annual imports of opium into the United States since 1840. He says that:—

"While $40,874 paid the foreign cost of all the opium imported at the ports of the United States in 1840, it took $932,887 to pay the cost in the year ending June 30, 1862, an increase from forty thousand to nearly one million of dollars in less than twenty-five years.

"Of the large sum last mentioned, 30,482 pounds, valued at $96,174, were landed at Boston; 163,055 pounds, valued at $554,443, at New York; while the value of $281,796, mostly 'prepared' opium, was landed on the Pacific, chiefly for the use of the Chinese in California. It is true that the medical business connected with the army is responsible for a portion of this increase since the war began; but the statistics show a very heavy consumption of opium previous to the war—the imports for the year ending June 30, 1860, averaging over one hundred and twenty thousand pounds per annum. This is an enormous amount for the consumption of this country, and shows that a large number of people must use the drug habitually, in some form, for the gratification of their cravings for a stimulant. There may be less disgrace connected with its use, but the effects, mental and physical, are far more injurious than those which follow the abuse of alcoholic drinks, while the habit is much less easily cured or restrained."—*American Druggists' Circular.*

Eighty-three men were discharged and mustered out of the service at the Knight Hospital, New Haven, last week; three were admitted, and one died.

Dr. T. Townsend has been relieved from duty at the Knight Hospital, by order of the Department Medical Director, his services being no longer needed. He has been on duty since April 10th, 1863.

The graduating class at the recent Commencement of the University of Vermont, at Burlington, numbered thirty-two.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, July 1st, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week	40	41	81
Ave. mortality of corresponding weeks for ten years, 1853—1863,	35.4	33.6	69.0
Average corrected to increased population	00	00	76.27
Death of persons above 90	0	0	0

Married,—At Framingham, June 11th, Henry Allen, M.D., of Chicago, Ill., to Miss Nancie D. Brown, of Framingham.

Deaths in Boston for the week ending Saturday noon, July 1st, 81. Males, 40—Females, 41. Abscess, 1—accident, 1—congestion of the brain, 1—disease of the brain, 7—cachexia, 1—cancer, 1—cancrum oris, 1—cholera infantum, 8—consumption, 12—convulsions, 4—croup, 1—debility, 1—diarrhœa, 2—diphtheria, 1—dropsy of the brain, 2—drowned, 1—dysentery, 2—typhoid fever, 4—gastritis, 1—gangrene, 2—disease of the heart, 3—homicide, 1—infantile disease, 1—inflammation, 1—disease of the liver, 1—inflammation of the lungs, 4—marasmus, 1—old age, 2—puerperal disease, 2—pyæmia, 1—rheumatism, 1—smallpox, 2—syphilis, 1—unknown, 6.

Under 5 years of age, 33—between 5 and 20 years, 8—between 20 and 40 years, 20—between 40 and 60 years, 13—above 60 years, 7. Born in the United States, 59—Ireland, 15—other places, 7.

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ABORTION—RETAINED PLACENTA.

[Read before the Boston Society for Medical Observation, and communicated for the Boston Medical and Surgical Journal.]

BY J. B. TREADWELL, M.D.

MRS. L., æt. 34; born in Germany; came to this country eleven years ago; married six years. Rather below medium size; never very robust, although she enjoyed pretty good health until she was 21 years old, when she suffered from an attack of acute rheumatism; and since then she has been subject to the same disease in its subacute and chronic forms. She had an attack of the subacute variety three years since, which lasted for six months. Menstruation commenced at the age of 12, with nothing unusual with regard to its symptoms until she attained the age of 23, when without any recognized cause it ceased for some time; the monthly periods, however, subsequently returned with their accustomed regularity, but the menstrual discharge, which had previously been quite copious, was now very slight indeed, and for years never lasted more than a single day. This fact is worthy of note in connection with one to be mentioned hereafter. The patient suffered from chronic bronchitis during the past winter.

March 21st, 1865.—Was called to see patient at 1, P.M. Found her in labor, which had commenced on the previous day. She had not menstruated for five months. The waters had escaped twelve hours before I saw her. Labor pains had been present since the afternoon of the preceding day. She was so confident that she was not pregnant that she had neglected to call medical advice until I was summoned, at which time the pains had entirely ceased. There had been no flowing whatever. The uterus, as felt through the abdominal walls, appeared to be some four or five inches in length, and firmly contracted. I found a fœtus in the vagina, with the lower extremities protruding from the external organs of generation. It is altogether probable that it had been in this position for several hours. Upon removing the fœtus, the os uteri was found to be some three fourths of an inch in diameter, and exceedingly rigid, with the

cord and a small portion of the placenta, in the shape of a lip, protruding through it. The cord, being very friable, was unfortunately broken in being used as a guide for the fingers. The fœtus was 11¼ inches in length, with the umbilicus one half inch below the central point. The nails were considerably developed. It was evidently about five and a half months old. Although the uterus seemed to be firmly contracted, I thought it best to try the effect of ergot, and accordingly gave one drachm of the fluid extract in three doses, at intervals of twenty minutes, hoping that under its influence the uterus might be roused to further action, and the placenta thus be thrown off. No obvious effect, however, was produced. At 3, P.M., I etherized the patient, with a view of relaxing, if possible, the parts, but without obtaining any advantage whatever. At 4, P.M., Dr. J. P. Reynolds saw the patient, and it was decided to attempt the removal of the placenta with forceps; accordingly, at 5, P.M., the attempt was made by Dr. R., first without, and subsequently with, the administration of ether. Nothing was accomplished, however, except that two or three very small pieces were detached and brought away. The friable character of the placenta, together with the unyielding state of the os, accounted for the non-success of this as well as of subsequent attempts. Slight hæmorrhage only attended the operation. She was ordered one drachm of the saturated tincture of ergot every fifteen minutes until five doses were taken, and pulv. opii, gr. ij., in pill, at 8 o'clock. At 9, P.M., she was comfortable. Pulse 96, good. No hæmorrhage. ℞. Tinct. ferri chld., gtt. x., in syrup, every eight hours.

22d, 10, A.M.—Comfortable throughout night, although she did not sleep much. Pulse 90, full. No flowing. Complains of "wind" in abdomen. 1, P.M., Dr. R. again saw patient. Vaginal examination revealed same condition of things as yesterday. Another attempt to remove the placenta was made, with the same want of success as before. The operation was attended with some hæmorrhage, which rather reduced the patient's strength. It was agreed to avail ourselves of the opinion and skill of Dr. Storer, sen., who saw the patient at 4, P.M., and decided that one more attempt at removal should be made. This also proved unsuccessful, only two small bits being brought away. Some hæmorrhage attended the operation, which considerably depressed the patient. By the aid of stimulants, she rallied in a short time, however. A rubber vaginal plug was introduced, with a view of preventing further hæmorrhage and effecting, if possible, a gradual dilatation of the parts. She was ordered to continue the iron, and have spts. vini gal., ʒ ss., every three hours. 9, P.M.—Pretty comfortable; thirsty; complains of some inconvenience from vaginal plug. Continue solution morphine sulph., ʒ ij., to be repeated if she has any pain.

23d, 9, A.M.—Passed a comfortable night. Slept somewhat. Pulse 144, moderately full and strong. Respiration 24, quiet. No

flowing. Considerable abdominal distension. Vaginal examination revealed no change in the condition of things. The plug was removed, and vagina was syringed with warm water twice daily. Tr. ferri chld. increased to twenty drops every three hours. Spts. vini gal., ʒ ss., every five hours. Sol. morph. sulph., ʒ i., four times a day. Turpentine stupes to abdomen. 2, P.M.—Pulse 144. Respiration 26. Countenance somewhat anxious. Had a well-marked chill at 10.15, A.M. Some abdominal pain. Incontinence of urine, which is continually dribbling away. Sol. morph. sulph., p. r. n. 9, P.M.—Pulse 120. Respiration 20. Comfortable. No vaginal discharge. Turpentine stupes to be applied in case of pain.

24th, 10, A.M.—Comfortable. Slept well. Pulse 120, good. Respiration 20. Continue treatment. 8, P.M.—Pulse 126. Otherwise same as in morning.

25th, 10, A.M.—Pulse 114. General condition as yesterday. Continue treatment. 8, P.M.—Some abdominal tenderness. Resume stupes. Continue treatment.

26th, 7.15, A.M.—Called to see patient, who is not so well. Pulse 120, weak. Countenance anxious. Considerable abdominal tenderness. Stupes to abdomen. Sol. morph. sulph., ʒ i., and spts. vini gal., ʒ ss. every three hours. 3, P.M.—Same as at morning. Continue treatment. 7, P.M., Pulse 102. Better than in morning. Continue treatment.

27th, 9, A.M.—Pulse 108, good. Respiration 24, quiet. Tongue moist. Perspiring very profusely. Slight chill at 12.30, A.M., lasting twenty minutes, followed by some fever. Continue treatment. 6.45, P.M.—More comfortable. Pulse 106. Respiration 24.

28th, 10.40, A.M.—Pulse 102. Tongue moist. Abdomen natural. No vaginal discharge. 8, P.M.—Pulse 96. Skin natural. Slight chill at 1, P.M. Morphia once in seven hours. Continue treatment.

29th, 12, M.—Pulse 96, good. Appetite improving. Small piece of placenta, of the size of a very small filbert, came away this morning. Continue treatment. 10, P.M.—The same. Continue treatment.

30th, 2.15, P.M.—Improving. Continue treatment.

31st, 12.15, P.M.—Pulse 86, full. To have a piece of steak for dinner. Morphia twice daily. Spts. vini gal., ʒ ss., every four hours.

April 1st, 1, P.M.—Pulse 82. Doing well. Continue treatment.

2d, 10.30, A.M.—Same as yesterday. No vaginal discharge. Continue treatment.

3d, 12, M.—Pulse 90. Tinct. ferri chld., twice daily. Spts. vini gal., ʒ ss., every five hours. Omit morphia. The bowels not having been moved since confinement, she was ordered a simple enema, to be followed by one containing ol. terebinthinæ, if no dejection. Continue treatment.

4th, 12, M.—Pulse 84. Gaining strength. Enema produced a movement of bowels. Vaginal examination revealed everything in normal condition. Neck of uterus of natural size. Continue treatment.

5th, 10, A.M.—Pulse 96. She got up yesterday, contrary to orders. Continue treatment.

6th.—Pulse 86. Gaining strength. Continue treatment.

7th.—Pulse 86. One dejection. Spts. vini gal. four times a day.

8th.—Same as yesterday. Tinct. ferri chld. twice a day.

9th.—Pulse 90.

10th.—Pulse 96. Three mucous discharges, with considerable pain, this morning. Omit tinct. ferri chld. Sol. morph. sulph., p. r. n.

11th.—Pulse 96. Doing well.

13th.—Allowed to get up.

22d.—Since last report, she has been gaining strength and flesh rapidly. Uterus appears to be scarcely larger than in virgin state. The most nourishing diet has been allowed throughout.

Two or three points in the above case are perhaps worthy of special note. 1st. The very small amount of hæmorrhage and the entire absence of any lochial discharge, taken in connection with the fact that the menstrual discharge had been very slight for some years past. 2d. Retained and possibly adherent placenta, taken in connection with the marked rheumatic diathesis.

Of course, it is impossible to say what the exact condition of the interior of the uterus may be, but from careful examination I am satisfied that there cannot be any considerable portion of placenta remaining there; indeed, its size at the present time forbids any such idea. I am confident, also, that the placenta has never been discharged. The small pieces which were removed at different times could not have amounted in the aggregate to more than half the size of a man's thumb.

ON THE CEREBRO-SPINAL SYMPTOMS AND LESIONS OF TYPHUS FEVER, AND ON THE RELATION OF TYPHUS TO EPIDEMIC CEREBRO-SPINAL MENINGITIS.

By Charles Murchison, M.D., F.R.C.P., Physician to the London Fever Hospital.

It is well known that among the phenomena of typhus the cerebro-spinal symptoms hold a very prominent place. First, there is headache, with vertigo and injected conjunctivæ; then come restlessness, sleeplessness, and delirium, followed by stupor or coma. With these symptoms may be associated paralysis of the sphincter or of the detrusor muscle of the bladder, hyperæsthesia, tremors, floccitatio, subsultus or general convulsions, strabismus, tetanic rigidity of the muscles of the limbs, or even opisthotonos. Occasionally typhus commences with violent delirium and other cerebral symptoms, so

that more than once I have known it mistaken for acute mania. The disease, in fact, is the *typhus comatosus* of Sauvages—the *brain fever* of many practitioners. Similar symptoms are sometimes, though more rarely, met with in the course of enteric fever, and have lately been made the subject of a separate monograph by Dr. Fritz.

Among the most common anatomical lesions of typhus are engorgement of the venous sinuses of the dura mater, increased vascularity of the pia mater, and an accumulation of serous fluid in the ventricles and in the subarachnoid space of the brain and cord.

It is not many years since these symptoms and lesions were believed to be the result of inflammatory action in the membrane of the brain and cord, and the treatment of typhus was based upon this belief. But the researches of John Reid and of all subsequent observers have demonstrated that there exists no relation whatever between the degree of vascularity and the amount of subarachnoid fluid on the one hand, and the severity of the cerebral symptoms during life on the other; while it is now universally admitted among pathologists that the lesions of typhus are quite independent of inflammatory action. This is the result of my own observations; and the investigations of John Reid, Peacock, Jenner, Jacquot, Barrallier, and of all modern observers who have had much experience in the *post-mortem* examinations of typhus, lead to the same conclusion. Mr. Moering, of the Russian army, examined the cerebral membranes and subarachnoid serosity in upwards of two hundred cases of typhus, but in no instance could he detect a single pus or exudation corpuscle. The brain in typhus becomes atrophied from want of proper nutrition, and the fluid appears to be effused to fill up the space. It has been well observed, that those symptoms which indicate inflammation of the brain under ordinary circumstances, do not indicate inflammation when the case is one of typhus fever. Still it is not surprising that many modern practitioners, having little experience in *post-mortem* examinations, regard the cerebral symptoms and lesions of typhus as due to inflammation, and that when the disease shows itself in countries where it is little known this should be the common opinion.

But to the rule above laid down there are exceptions. In rare cases, typhus fever is complicated with unmistakable inflammation of the membranes of the brain. At the time of publication of my work on Fevers, I was under the impression that this complication never occurred, but subsequent experience has convinced me that I was mistaken. In the interval I have met with two unequivocal cases of typhus complicated with true meningitis and the effusion of lymph on the surface of the brain. One case was that of an infant aged seven months, admitted with his mother into the London Fever Hospital. Both mother and child had a characteristic typhus rash. The infant was feverish and very restless, moved his head constant-

ly from side to side, and died about the fifth or sixth day of his illness, death being preceded by a severe attack of convulsions. After death the pia mater was found to be intensely injected, and there was a quantity of solid lymph plastered over the base of the brain. The second case was that of a girl aged 19, who had previously enjoyed good health. During the first night of her illness she was delirous; in the second night she had acute delirium, followed next day by coma. On the fourth day of her illness an eruption of typhus appeared on the chest and abdomen, and rapidly became petechial. On the following morning, at 3, A.M., the patient died comatose. On examining the body, the petechiæ on the skin were found to be persistent. There was intense injection of the pia mater and of the brain substance. The white matter presented a pinkish tint, and the grey matter a dark chocolate hue. Large patches of soft, opaque, yellow lymph were found on the surface of the hemispheres following the course of the veins. There was no lymph at the base, and no subarachnoid serosity. Each of the lateral ventricles contained about half a drachm of turbid fluid. In a third case, a girl aged 5, admitted into the London Fever Hospital, typhus proved fatal about the fifteenth day from tubercular meningitis; but in the two first-mentioned cases no trace of tubercle could be discovered either in the membranes of the brain or in the lungs. In an epidemic of typhus in 1831, several cases were observed by Dr. Roupell, in the Seamen's Hospital, in which lymph or pus was found deposited beneath the arachnoid. Some of these cases were dissected by Mr. George Busk, F.R.S., who, I find, corroborates Dr. Roupell's descriptions. A case of typhus complicated with true meningitis is reported by Jacquot. Louis also records two cases of enteric fever, in which the signs of recent meningitis were found after death.

The above remarks appear to me to be not altogether irrelevant to the subject of what is called "epidemic cerebro-spinal meningitis," about which much has been said in connection with the epidemic now prevailing in Russia and Germany. The accounts of this epidemic make it clear that it consists for the most part of relapsing fever and typhus, and that in this respect it resembles the Irish epidemic of 1847. One of the diseases composing it, however, has been described as cerebro-spinal meningitis—a true inflammation of the pia mater, accompanied by effusion of lymph or pus, attacking chiefly young children, and "decidedly infectious." This malady has been spoken of as prevailing at St. Petersburg, but more especially at Dantzic, and the Polish frontier of Prussia, and in Brunswick, Hesse and Hanover.

Epidemic cerebro-spinal meningitis is said to have been first accurately observed at Geneva in 1805, and since then epidemics of it are recorded as occurring in France, Italy, Norway, Denmark, Ireland and America. For a full account of all these epidemics I must refer to the elaborate works of Boudin and Hirsch.

It is possible that some of these epidemics were really examples of primary inflammation of the cerebral and spinal membranes; but when this seemed to be the case it is to be noted that the persons attacked were comparatively few, that no eruption appeared on the skin, and that there was no evidence of the disease being infectious. I would instance in particular the epidemic described by Dr. Mayne, as attacking children in several of the Irish workhouses in 1846, with regard to which the absence was noted "of any proof that it has ever been propagated by contagion." But most of the epidemics, it is to be observed, occurred under precisely the same circumstances as those in which typhus appears—that is to say, they occurred in overcrowded and badly-ventilated barracks, prisons, and workhouses, and among the poorest of the civil population living in overcrowded houses and narrow courts. Speaking of the French epidemics, M. Corbin says:—"La cause principal à nos yeux (et en cela nous sommes d'accord avec M. Tourdes, avec M. Gasté, et avec la plupart des médecins militaires), c'est l'encombrement." Speaking of the epidemic in Italy, M. Devilliers writes:—"Elle atteignait des populations pauvres, entassées quelquefois pendant l'hiver pêle-mêle avec les bestiaux." Like typhus, the disease has been most prevalent in winter and spring, and, like typhus, it has been propagated by contagion. It is true that some writers have doubted its contagious character, just as some observers have denied that typhus is contagious; but the fact that the disease has in many instances been transported by certain French regiments from one locality to another, in my opinion, settles the question.

The American epidemics of cerebro-spinal meningitis, which have been regarded as the precise counterpart of those observed in Europe, may be selected for more detailed investigation; and, in the first place, it is a significant fact, that in America "epidemic cerebro-spinal meningitis" has long been known by the designation "spotted fever." At the present time both terms are applied indiscriminately to the same disease. Among its chief symptoms are:—rigors, headache, and vomiting, succeeded by acute delirium, and afterwards by coma, and in some cases by convulsions or tetanic rigidity of the muscles; a dry brown tongue; injected conjunctivæ; albuminous urine, and an eruption upon the skin rapidly becoming petechial. The principal *post-mortem* appearances are:—increased vascularity of the meninges of the brain and cord; an effusion of serum beneath the arachnoid and into the ventricles; occasionally lymph or pus beneath the arachnoid; hypostatic congestion of the lungs; enlargement of the spleen; a fluid condition of the blood, and extravasations of blood in various parts of the body. Two of these characters require especial notice—viz., the eruption and the lesions of the cerebro-spinal membranes. One writer describes the eruption as sometimes "like measles;" a second, as "not unlike the spots seen in enteric and typhus fever," and as sometimes presenting "all

grades from the rose-colored rash to the deep and permanent petechiæ;" while a third writes of them thus:—"The more recent and smaller ones disappeared on pressure, while the larger ones were ecchymotic in character. The larger ones were dark in their centres, and of a light-red along their margins. Their form was exceedingly irregular; they were notched and irregular in outline, and either angular or nearly rounded, none having any definite oval form." Lastly, Dr. Upham, in one of the ablest memoirs on the subject, observes:—"Petechiæ were not an unfrequent manifestation—in appearance almost identical with the true typhus eruption, and like that seen upon every part of the body except the face—persistent on pressure, varying in hue from the darkest aspect of measles to that of the true petechial spots imbedded in the skin." No better descriptions could be given of the eruption of typhus. With regard to the cerebral lesions, it is to be noted that though, as in typhus, lymph and pus were found in some cases, in many the effusion was simple serum, while in others the brain and membranes were perfectly healthy; so that, according to a late writer, "the conclusion is irresistible, that the disease consists of a pathological condition of the system at large, whereof the various local lesions are but the accidental complications." If to the above characters be added the facts, that its contagiousness is a disputed question, and that it has been found to prevail chiefly under circumstances of overcrowding and inadequate ventilation, it cannot be surprising that many American physicians admit the close relation of cerebro-spinal meningitis to typhus, while some maintain the identity of the two diseases. It may be well, therefore, to consider the four points of distinction between them laid down by one of the latest writers on the subject, Dr. Lidell, and in doing so I adopt the writer's own words.

1. "Spotted fever often runs its course in a few hours; typhus requires at least several days." The rapid course of many of the American cases, and of epidemic cerebro-spinal meningitis generally, is no doubt remarkable, but is not sufficient to found a distinction, for many cases of typhus are on record where the disease has terminated fatally on the second or third day, or even after a few hours. Such were the cases of *typhus siderans*, or *blasting typhus*, which devastated the garrisons of Saragossa, Torgau, Wilna and Mayence during the wars of the first Napoleon. Similar cases were observed in Ireland during the epidemic of 1847–48, and amongst the French troops in the Crimea in 1856.

2. "Spotted fever is frequently attended with convulsive movements; typhus fever is never so accompanied." My experience of typhus is precisely the reverse. Convulsive movements are not uncommon. During the last three years upwards of forty cases of typhus, complicated with general convulsions, have been observed at the London Fever Hospital, and in several instances I have noted

strabismus, tetanic contractions of the muscles of the limbs, and even opisthotonos.

3. "Spotted fever patients often die very suddenly and unexpectedly of coma and asphyxia; typhus patients do not die in this way." According to my experience of typhus, the most common mode of death from the primary fever is by a combination in various proportions of syncope and coma. A large proportion, also, of fatal typhus cases are complicated with pulmonary disease, and then death occurs by coma and asphyxia. Moreover, I have repeatedly known patients who appeared to be going on well become suddenly comatose, and die in a few hours.

4. "The eruption in spotted fever frequently appears on the first day; while in typhus the eruption does not appear till the end of the week or more." According to my experience, the eruption of typhus usually appears on the third or fourth day, is rarely delayed beyond the sixth day, and may sometimes be noted on the second day. It is well known, also, that in severe cases of most blood diseases petechiæ may appear as early as the first day. The sooner the eruption of variola appears, the more grave is the case.

These considerations seem to justify the opinion that the grounds for drawing a specific distinction between the epidemic cerebro-spinal meningitis or spotted fever of America and typhus fever, are most inconclusive, and particularly when it is recollected that typhus fever running the ordinary course has been prevailing in many parts of America since the commencement of the present war. I agree entirely with the opinion expressed by Dr. Upham: "The disease," he says, "seemed to me rather to partake of the nature of typhus, in a severe and malignant form, identical in its essential elements with the typhus fever of Great Britain, which, under the names of maculated typhus, ship fever, camp or goal fever, has many times been observed in this country—having, in this instance, a special direction to the meninges of the brain and spinal cord." And if we study the accounts of the epidemic cerebro-spinal meningitis which is said to prevail at present in Russia and Germany by the light of the American descriptions, we are forced, I think, to a similar conclusion. It is needless to recapitulate the symptoms of this epidemic, for they are almost identical with those observed in America, including an eruption which sometimes resembles that of measles. But if we bear in mind further that this Russian cerebro-spinal meningitis is said to be "decidedly infectious;" that its prevalence is favored by overcrowding and bad ventilation; and that there is a concurrent epidemic of undoubted typhus, it seems probable that the infectious cerebro-spinal meningitis of Russia and Germany is merely typhus running a rapid course with severe cerebral symptoms, and sometimes with actual meningitis, as in the cases observed at the London Fever Hospital. At all events the possibility of such being the case must not be lost sight of.

It would be a fit subject for inquiry if any relation exists between the frequency of convulsions in the typhus of Russia and the use of bread containing spurred rye. A disease termed "convulsive ergotism," distinguished by the characters of an acute comatose affection —giddiness, dimness of vision, insensibility, convulsions, imperceptible pulse, and death within two days, is said to prevail in the epidemic form in various parts of the continent where rye constitutes a considerable proportion of the food of man. There is, however, no evidence or probability that this disease is infectious.

In conclusion, I would only observe that before attempting to establish a new specific disease, it is necessary to keep in view the many modifications which those already known to us may undergo; and more particularly to study their etiological relations, and the circumstances under which they arise and are propagated.—*London Lancet.*

BACTERIDIA AND MALIGNANT PUSTULE.

To the Editor of the Lancet.—*Sir*,—The facts related in the following extract from a masterly article on Spontaneous Generation, by M. Jamin, in the *Revue des Deux Mondes*, are in all ways so interesting, that I make no apology for asking you to publish them. I ought to add that the italics, which occur in one or two places, are mine.

"Dr. Davaine has devoted himself for some years to the careful study of a terrible malady of the 'charbon' genus—the splenic apoplexy (*sang de rate*—anglicé, 'blood') which developes itself spontaneously in sheep, and is inevitably fatal to them. The blood of the diseased animals, examined under the microscope, has been found crowded with minute organisms allied to the *bacteria*, and which have been named *bacteridia*. This blood injected into the tissue of another animal carries these creatures with it, and death is certain. The malady is equally transmitted when a rabbit is made to swallow either the blood or part of an animal affected with splenic apoplexy. The infected blood may be dried and *kept for an indefinite time without losing the germs of the infusoria which it contains;* and whenever it comes to be injected or to be given as food, the disease is propagated. These facts being ascertained, as the symptoms of splenic apoplexy offer some affinity to those of another malignant malady known by the name of 'charbon' (or 'malignant pustule'), inquiries were instituted as to whether there might not be a still closer bond between the two affections. 'Charbon' begins by a 'malignant pustule' of blackish color, surrounded by a ring of vesicles, which must be speedily destroyed by caustic, if a general infection is to be avoided. On the 14th of April, of the present year (1864), Dr. Raimbert was called to a carter, who had contract-

ed a true malignant pustule on a farm where the sheep were suffering from splenic apoplexy. He removed the pustule, dried it at once, and handed it over to Dr. Davaine, who examined it under the microscope. It was a perfect *felt, composed entirely of bacteridia.* Rabbits fed with it contracted splenic apoplexy in consequence, and died with their blood crowded with *bacteridia,* and communicated 'charbon' to other animals. Here, then, is a disease transmitted from sheep to man, and appearing in him under the form of a pustule, which, in its turn, has the power of communicating to all animals the particular virus which it contains. And what is this virus? A brood of infusoria of a special and venomous species. *The smallest quantity suffices to kill, because it suffices to sow and multiply the species.* The malady is transmitted by inoculation, because the animalcules pass from the infected to the inoculated subject; it is transmitted by the air, because the germs dry up and are wafted away, and become again sown; possibly, also, as many hold, by the bites of flies, which thus become the vehicle for the transmission of the *bacteridia.* Such is the explanation, not less simple than certain, of the effects of a particular virus. The future will decide how far it is possible to extend to all analogous cases so fertile a theory, but already it is easy to understand the hopes of physiologists and to predict their success; perhaps we are on the eve of knowing, avoiding and curing contagious scourges."

The facts here detailed are not altogether new. Virchow, and some earlier observers, whose names escape me for the moment, had already pointed out the occurrence, in countless numbers, of a kind of "vibrio" in the blood of *living* animals affected with charbon.

I have not been able to refer to Dr. Davaine's own account of these researches; but before the case which he wishes to make out for the minute organisms he describes can be considered as finally established, other data will be required beyond those adduced by his reviewer. Not only must the constant presence of this particular species of *bacteridia* in the diseases in question be ascertained, but its absence in other putrefactive disorders. In all such cases there is a special danger, which those who have most studied the subject will best appreciate, of falling into the old error of taking for essential what may possibly be only an epi-phenomenon. The perfect way in which the facts seem to explain all the conditions, although a strong argument in favor of the interpretation set upon them, may, on the other hand, easily beguile us into a too ready acquiescence in it.

At the same time, the whole tendency of recent research, and of Pasteur's discoveries in particular, is to the effect that the tribe of minute organisms to which the *bacteridia* belong, in reality take the initiative in, and are the primary cause of, the zymotic changes with which they are found associated.

The uncontrollable *itching* which marks the first stage of malig-

nant pustule, and is so characteristic of it, is, when considered as a phenomenon which betrays the presence of so many parasites in other parts, not undeserving of attention in connection with Dr. Davaine's view.

Should his discovery be confirmed by more extended researches, it is one of which it will be difficult to overrate the value.

As regards malignant pustule, its importance will be supreme. Diagnosis, pathology, origin, mode of propagation, and indications of cure will be all summed up in the conditions which attach to the growth and multiplication of a single parasitic organism.

In relation to diagnosis, the fact is one which might eventually become of the greatest possible use. For, if it be true that the first brood of *bacteridia* is developed in the part which is to be the seat of the future pustule, the practitioner, armed with the microscope, and with the little "harpoon," with which the Germans dip for trichina, might ascertain the characteristic presence of these minuter parasites by means of an operation not more formidable than the puncture of a grooved needle.

But, as M. Jamin rightly suggests, the interest of this discovery, should it be confirmed, culminates in its relation to the subject of contagion generally.

In a memorandum on the Investigation of Epidemic and Epizotic Disorders, which I drew up at the request of the British Medical Association, in March, 1863, there occurs the following passage:—

"In order to render the inquiry on which the Association is about to enter really comprehensive, it would be necessary to associate with the study of epidemics that of the diseases caused in man and animals by living parasites, external and internal.

"A fuller knowledge of the phenomena attaching to the dissemination of the prolific and minute germs of these parasites could not fail to be of great use in helping to the true interpretation of the phenomena which attach to the strictly analogous dissemination of the equally prolific and equally minute germs of contagious poisons.

"In particular, it would be of the highest value in showing by data that could not be gainsaid, what is the real worth of the negative evidence now so implicitly relied on, as an indication of spontaneous origin, and as opposed to the law of propagation by continuous succession.

"Additional reasons for putting the parasites and the contagions together in such an inquiry, are:—1, that at many points the two blend, insensibly, one into the other; 2, that, with the advance of knowledge, diseases are constantly being transferred from the group of common contagions to the group of parasites; and, 3, that there already exists amongst the most advanced thinkers on these topics, a shrewd suspicion that the two groups will eventually coalesce, and be found in their essence identical."

Dr. Davaine's interesting discovery seems not unlikely to offer a

striking illustration of more than one of the several positions here taken. I am, Sir, your obedient servant,

WILLIAM BUDD, M.D.

JACOBSON'S METHOD OF EXTRACTING CATARACT.

JACOBSON, referring to a pamphlet he had published on the subject, stated that during five years he had operated by his method on one hundred cases, two of which were lost from suppuration; that since that time, in a space of somewhat more than a year, he had operated on a further forty cases, with a loss of only one eye. He then dilated on the three principal peculiarities of his method.

1. *Chloroform is always given to complete Narcotism.*

2. He always *makes his flap in the boundary-line of the cornea and the sclerotic*, through a vascular structure therefore. To this he ascribed the rapid union of the edges of the wound he had obtained. A second advantage of this method of section was that in case of any retraction of the cornea occurring, this never extended to the line of incision, so that no separation of the edges of the wound took place.

3. He *removes that portion of the iris, after extracting the lens*, which appears to be most exposed to bruising by the exit of the lens. The unusually eccentric position of the line of incision of the flap renders it easy to remove the portion of the iris up to its extreme ciliary border.

An animated discussion ensued on the entire question of the methods of extracting hard cataracts.

Arlt said, Prof. Jacobson's statistics were very remarkable: he himself had only succeeded in restoring vision to ninety per cent. of his patients, the minimum amount of vision being the power of finding their way about alone. He considered suppuration of the cornea a secondary condition supervening in iritis and irido-choroiditis. He saw no advantage in Jacobson's line of section, indeed considered it predisposed to prolapsus of the iris in cases in which iridectomy had not been performed. The size of the section must be regulated by that of the cataractous lens. Iridectomy should not be performed uselessly, for it causes ultimately a dazzling. But Arlt considered it advisable (1) in simple cataracts liable to their cortex rubbing off during extraction; (2) when the pupil did not properly dilate; (3) if the cataract was very hard, and the section of insufficient size;—in these cases the iridectomy should precede the opening the capsule: in the following ones it should succeed it. (1) If the iris has suffered much bruising by the exit of the lens; (2) if any cortical substance is left behind.

Rothmund considered iridectomy should not be unconditionally performed in extraction; he agreed with Arlt in its indications, and did it immediately after the section, contrary to the practice of Ja-

cobson, who first extracted, excepting when any cortical parts of the cataract remained behind.

Arlt appended his experience as to the influence of portions of the cortex of the cataract being left in the anterior chamber. He was, from years' experience, convinced that the swelling-up of such cortical portions often led to the destruction of the eye, especially in over-matured and certain forms of fluid cataracts. If lens and capsule be enucleated in one, no suppuration need be feared.

Dor regretted that Prof. Jacobson had not more circumstantially given the exact amount of sight his patients had attained. He also wished some further explanations on the enormous doses of chloroform, the tolerance to which could not, at any rate, in children, be explained by intemperance.

Jacobson stated, circumstances had not permitted him yet to give the exact visual power his patients had attained for a sufficiently long period after the operation.

Sczokalsky testified to chloroform facilitating the operation of extraction. He had also remarked an increasing tolerance for chloroform.

V. Gräfe made the following remarks:—In the vast majority of cases the cornea was the first to suffer, the iris and choroid secondarily; he had observed diffuse suppuration and annular abscess of the cornea in a case of irideremia. He protested against Arlt's dictum that no suppuration could ensue, if the lens was enucleated with its capsule entire.

He believed that the systematic conjunction of iridectomy with extraction diminished slightly the number of lost eyes; but questioned whether this compensated for the general impairment of vision such patients experienced from the over-large pupil, which failed, as a less pupil would do, to correct, and, to a certain degree, to supplement those imperfections of vision necessary to an absence of all accommodating power. He practically found the enlarged pupil caused in the patients a want of power of exactly localizing their visual impressions.

He stated that he was now occupied in analyzing the statistics of the acuteness of vision he had obtained in 1,600 flap-extractions. All he would now signalize was, that the operation on the lastly-affected eye yielded by far the more favorable result. He considered certain over-mature cataracts especially dangerous to operate on, not so, as Arlt, however, cataracts with a fluid cortex as with a viscous one that adhered to the capsule. He considered the capsule-epithelium often contributed far more than any cortical *débris*, by its germination, to a disastrous result. He had, however, under certain circumstances, especially in unripe cataracts, preceded extraction by opening the capsule some time before.

Arlt said, if the suppuration commenced, as v. Gräfe assumed, in the cornea, it could hardly be prevented, as it was, by compress-

bandages, &c. However, what he wished particularly to impress was the danger of leaving any cortical parts of the lens behind. He did not attach so much importance to the general constitution of the patient as was usually done; for how was it that in a double extraction sometimes one eye turned out well whilst the other went wrong?

V. Gräfe adverted to cases in which suppuration of the cornea led to irido-cyclitis, morbid changes in the vitreous, retina, &c., and thus the destruction of vision, without this result being directly induced by the corneal suppuration, which might have completely retrograded.

As regarded one eye doing well, the other badly, in a double operation, this might depend on the one being more diseased than the other; this view was borne out by the greater liability to a bad result of the eye which first became cataractous—a fact in itself pointing to the unequally morbid conditions of the two eyes. He was satisfied of the importance of the influence of the general constitution of a patient on the result of an extraction.

Arlt said, such difference in the two eyes as Prof. v. Gräfe alluded to was possible, but not yet proved. He would again protest against Prof. Jacobson's assertion of the innocuity of cortical *débris* left behind after an extraction.

Ruete did not consider small portions of lens-cortex remaining of vital importance, but agreed on the danger of larger ones. He cited a case in which, after an operation for division, the lens-substance swelled up and produced violent symptoms, which entirely disappeared as soon as the pupil was dilated by atropine, to re-appear again as the effects of the atropine went off.

Jacobson advised, in case of any residuary cortical fragments setting up irritation, the instillation of atropine every ten minutes. He agreed with v. Gräfe in the origination of purulent corneitis from the wound itself.—*The Heidelberg Ophthalmological Congress*, from *The Ophthalmic Review*.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JULY 13, 1865.

Meetings of State Medical Societies. Vermont Medical Society.—We are glad to observe an increasing interest in the periodical meetings of our State Medical Societies. They are steadily gaining in scientific importance, and cannot fail to exert an excellent influence upon the general tone of the whole profession. The character of these meetings has been very various in different States. In some, as in our own heretofore, the principal object has been to listen to the annual address and to enjoy the social re union of brethren so rarely

brought in contact with each other at other times; while it was left mainly to the district organizations to keep up the standard of professional character, and to cherish in their several circles the love of scientific research and a faithful devotion to the cause of truth. In our annual meetings, however, we feel that it is but just to say, that the kindly intercourse of old friends which they permit has undoubtedly been the chief attraction which has brought the members together. Evidence of this appeared at our last anniversary, when the necessary omission (*res angusta domi!*) of the usual social entertainment led to a most deplorable deficiency in the number of fellows usually present. The opportunity which these occasions offer, however, for a free discussion of questions of general professional interest and importance, apart from the amenities of friendly communion, has impressed the Society so fully that, as we have before announced, it was determined at the last annual meeting to hold a session of two days next year, in order that ample time might be afforded for all the objects of these meetings. We rejoice in this evidence of renewed vitality in our old Society, and are confident it must result in much good.

Some of the Societies of our sister States are ahead of us in this important matter. The Medical Society of Vermont has just held a meeting, not only of two days' duration, which was of unusual interest, but we observe that it was a *semi-annual* meeting; so that even now they lead our State in the evidence which these occasions afford of active zeal in the interests of medical science. A report of this meeting has been furnished us by Dr. L. C. Butler, and it will be seen that the result is of much value to the profession at large. We are under great obligations to Dr. Butler for his excellent report, and should be glad to print a similar record of the doings of any of our State societies. They cannot fail to be read with much interest, and thus presented through our pages they will reach very many readers who cannot have access to them in the form in which they are usually printed.

The semi-annnal meeting of the Vermont Medical Society was held on the 28th ult. at Stowe, a thriving, busy little village, cozily nestled in a beautiful valley between the two forks of the Green Mountains. At the appointed hour a small representation of the medical profession of the State met in one of the spacious apartments of the Mount Mansfield Hotel, and the Society was called to order by the President, Dr. O. F. Fassett, of East Berkshire, and opened by prayer by Rev. J. T. Ford, of Stowe, in accordance with the resolution passed at the annual session. The minutes of the annual meeting were read by Dr. J. S. Richmond, Secretary. The President, in a brief opening address, made appropriate and timely suggestions in regard to a suitable tribute of respect to the Medical Staff of Vermont, who have so nobly done their duty in the army during the rebellion; in relation to the members of the Society who have died during the year; and also in regard to the inefficiency of the present registration law of the State. The first and last suggestions were referred to a committee consisting of Drs. Butler, Rublee and Sutton, to report at the annual session in October next.

Drs. Edwin Porter of Northfield, Noah Litemore of Lowell, A. I. Hyde of Hardwick, R. Sherwood of Hydepark, O. L. Watson of Mid-

dlesex, and T. J. Holbrook of Wolcott, were severally proposed for membership, and upon reference to the committee on admission of members, who reported favorably, were duly elected.

Dr. J. B. Gibson, of Dunham, C. E., was invited to a seat as an honorary member of the Society, and participation in its deliberations.

Dr. Crampton presented resolutions on the death of Dr. N. W. Fairchild, of Milton, a member of this Society, which took place April 9th, 1865, while in the faithful discharge of his professional duties. Dr. H. F. Stevens, of St. Albans, was requested to prepare and present a biographical sketch of the deceased at the annual meeting in October next.

Discussion on Veratrum Viride.—During the afternoon session, Dr. L. C. Butler, of Essex, presented a paper on *The Physiological Properties and Therapeutical Action of Veratrum Viride*, in which he commented on its peculiar properties as an arterial and nervous sedative, its wide range of therapeutical application, and demonstrated its reliability and safety in the treatment of a large class of diseases. The paper gave rise to an animated discussion, and was referred to the Committee on Publication.

Dr. Stevens coincided entirely with the views presented in the paper. He had used veratrum in many of the diseases named, with the happiest effects, and believed that pneumonia in particular, if seen in its early stages, might be controlled by it without the use of the lancet. There was one disease, however, not mentioned, in which he had used veratrum with the most gratifying results; viz., *mammary abscess.* His attention was first called to the use of it in this disease some years since, when travelling in the West, by a friend of his, a physician, who invited him to visit a patient whom he was treating for this affection with veratrum. His friend informed him that in every case where the drug was given before the hardening of the tissues commenced, the inflammatory action was promptly arrested. Since that time he had used it in many cases, but with the greatest benefit in those which were the result of febrile action locating in the breast as a *finale*, and when no induration had taken place. In these cases his experience in the administration of veratrum had been most happy. He believed it would arrest an inflammatory abscess at once.

Dr. Chandler contrasted the practice of forty years ago in pneumonia with that of the present day. His recollections of the lancet, antimony and blisters always used in that disease were vivid. The mortality was much greater than now. He preferred the modern treatment with veratrum, &c., as being much safer and more successful. He had used the article in croup, also, and always with good effect.

Dr. Clark had great confidence in it in pneumonia and in rheumatism; had used it in scarlatina, but thought it too depressing for many cases; thought much of it as an external application in acute diseases, whitlow, &c.

Dr. Jones could not express so strong a confidence in its effects. He had seen spasm of the diaphragm, hiccough, and irritation of the stomach produced by it. It had never taken the place of the lancet in his practice, and he thought we were liable to err in laying the lancet aside. If he could have the early hygienic management of pneumonia, he seldom bled, but he could not give veratrum to his patients

and go away from them feeling safe. He feared we were carrying the use of this article to extremes.

Dr. Chandler suggested that one reason why veratrum failed in the hands of some practitioners, is that the preparation used is impure or inert. He had found that the quality of specimens varies materially. [And this same reason will account not only for failure with veratrum, but with other remedies. The druggist is as likely to be influenced by the "almighty dollar" as any class of business men.]

Dr. Hathaway had used veratrum viride in articular inflammation, and pleurisy, and had never been disappointed in its effects.

Statistics of Diphtheria in Vermont. Discussion.—Dr. Stevens presented an elaborate paper embodying interesting statistical information in regard to the wide-spread prevalence and mortality of diphtheria, and particularly in certain portions of the State. These statistics he gathered from the Vermont Registration Reports. In 1858, the disease was first classed among the zymotics, and denominated diphtheria. Fourteen deaths were reported. In 1859, 79 deaths, the greatest number being in Orange County, midway of the eastern margin of the State. In 1860, 212; Washington, Windsor, Rutland and Orange suffering most, forming a belt across the middle portion. In 1861, 441; Rutland, Windsor, Orange and Addison giving the greatest mortality. In 1862, 818 were reported, the belt extending north into Caledonia, Washington, Chittenden and Lamoille. Thus showing a steady increase in the mortality from this terrible disease, culminating, probably, in 1863, which will doubtless exhibit a still greater mortality than any preceding year. The paper was referred to the Committee on Publication.

The presentation of this paper elicited an interesting discussion upon the whole subject of diphtheria, in which the members generally participated.

Dr. Hyde had seen two or three hundred cases, 15 to 20 per cent. of which had proved fatal. He had pursued one plan of treatment at one time, and laid it aside for another, with about the same disheartening result. He adopted Greenhow's pathology, that it is a constitutional disease with a local exudation, which, breaking down and being absorbed into the system, produces a poisonous condition of the blood. Local treatment may prevent this absorption, and cannot be dispensed with. It is not a throat disease exclusively. He had seen cases where the peculiar exudation was upon the foot, on the mucous membrane of the stomach, on the fingers and the toes, followed by the sequelæ of the disease. He uses local applications, and, in conjunction with them, a tonic course in mild cases. In malignant cases, where the exudation resembles gangrene, he had used bromine as a local application, in connection with quinine and the vapor bath, and had saved a larger proportion of his patients than formerly. Quinine should be used in heroic doses. Two grains every four hours will kill the patient, while ten to fifteen grains will kill the disease and save life.

Dr. Litemore had seen some forty cases in his locality, and had been quite successful in its treatment, save in one school district, where he had eleven cases, nine of which proved fatal. These cases were furiously delirious, almost maniacal, these symptoms soon being followed by prostration and death. His treatment was rhubarb and soda

to obviate the costiveness which he sometimes found present, quinine, carbonate of ammonia, potash and iron, with pork and onions for an external application. He did not think the disease any more contagious than typhoid fever.

Dr. Richmond referred to the division into *true* and *false* diphtheria, proposed by the London *Lancet*. He had found the peculiar membranous exudation in both forms, but thought it not so thick and tenacious in the false as in the true. The latter he readily recognized by the smell, it being much like that of rotten apples in a close room. The one form was constitutional, the other local. He used a saturated solution of muriate of ammonia and *French* (that being the purest) chlorate of potash, with a view to prevent the decomposition of the membrane, with fair success.

Dr. Sutton had remarked a difference in the color of the membrane, extent of the exudation, and in the constitutional symptoms in the two varieties—the false being in spots or white points, the true of an ash color, thickening into a tenacious membrane, and he had seen both going on together when the disease prevailed as an epidemic. In the former, he had never observed the peculiar smell alluded to.

Dr. Crandall related a case in which the membranous exudation of diphtheria was found in the vagina and on both labia, occurring after parturition.

Dr. Powers had noticed a disease among horses, which farriers called diphtheria. In one instance, a young man, in removing the exudation from a horse's mouth and throat, scratched the skin upon his hands, and had what he called diphtheria as a result.

Enormous Enlargement of Mammæ, with Suppression of Catamenia.—Dr. Chandler presented two photographs of an enormous enlargement of the mammæ, which he had seen in consultation with Dr. Branch. The patient is 32 years of age, healthy, weight about 90 pounds. One of the breasts measures three feet two inches in circumference at the base, the other an inch or two less; estimated capacity of both, twenty-four quarts; weight, *forty-eight* pounds. They are not painful; secretion not abnormal in quantity during lactation; no tenderness; not indurated or nodulated to the touch. The patient has had eight or ten children; a year or two since had slight enlargement, which she attributed to suppression of menstruation. When that function was restored, the breasts became of normal size. Six or eight weeks since, they began to enlarge again, the menses being suppressed. She applied to Dr. Branch for "driving medicines," as she termed them. How shall this rapid, morbid growth be accounted for? Is it vicarious menstruation, modified by the nutritive process?

Discussion on Cancer.—The evening session was mainly occupied in a discussion upon the subject of *Cancer*, with especial reference to the duty of the profession to prevent, as far as possible, the cases of cancer and cancroid growths, coming under their observation, from passing into the hands of the so-called "cancer doctors." Whilst the incurability of *true* cancer was admitted by all the speakers, it was suggested that more attention should be paid to diagnosis, as no doubt many tumors were pronounced cancers that were not really such, and the reputation of the "cancer doctors" was made by the cure of these. It was also suggested that the dread of extirpation by the knife operated to induce many to apply to quacks, inasmuch

as they seldom if ever use the knife, but substitute "caustics" and "drawing salves." The regular practitioner ought to know as much about cancers as the "cancer doctors," and as much about the application of remedies to check their progress or to "draw them out," as the quack. It was therefore suggested to be the duty of the profession to treat cancers and cancroid growths with such remedies, whether the knife, caustics, "salves," or placebos, as each case required, with a view to keep patients from jeopardizing their lives and fortunes by trusting to quacks.

Many of the members being desirous of occupying the second day with an excursion to the summit of Mansfield Mountain, the Society adjourned for that purpose.

At a called meeting of the Faculty of the Medical Department of the University of Louisville, Ky., held on the evening of the 4th inst., the following preamble and resolutions were passed unanimously :—

Whereas, Professor Benjamin Rush Palmer has been stricken down in the full and bright meridian of his life, and in the midst of his usefulness, we, his colleagues in the University of Louisville, have met together to give some suitable expression to our deep and painful sense of the sad bereavement we have sustained; therefore,

Resolved, That we recognize and deplore in the death of Professor Palmer an almost irreparable loss to the school which he adorned and dignified, and to the community in which he so usefully labored.

Resolved, That we will cherish with pride the memory of a man so eminently distinguished, as a sound and eloquent teacher, an able physician and a skilful surgeon.

Resolved, That we commend to the imitation of his surviving brethren the example of Dr. Palmer in his habitual and scrupulous observance of all the obligations of professional ethics.

Resolved, That we will transmit to the family of the deceased a copy of our proceedings and resolutions, together with our deep condolence upon the calamity which has overtaken them.

G. W. Bayless, *Dean of the Faculty.*

Damages Awarded.—Dr. Henry G. Clark, while City Physician, fell upon the ice in Chauncy street, and for injuries received he brought a suit against the city for twenty thousand dollars damages. The case was left to referees, who have awarded him six thousand seven hundred dollars.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, July 8th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	52	41	93
Ave. mortality of corresponding weeks for ten years, 1853—1863,	38.4	33.4	71.8
Average corrected to increased population - - - - -	00	00	79.36
Death of persons above 90 - - - - - - - -	0	0	0

Died,—At Louisville, Ky., July 4th, Dr. Benjamin R. Palmer, in the 52d year of his age.

Deaths in Boston for the week ending Saturday noon, July 8th, 93. Males, 52—Females, 41. Accident, 4—apoplexy, 1—inflammation of the bowels, 1—congestion of the brain, 1—disease of the brain, 4—inflammation of the brain, 1—cancer, 2—cholera infantum, 9—cholera morbus, 1—consumption, 13—convulsions, 2—croup, 1—cyanosis, 1—diarrhœa, 4—dropsy, 1—dropsy of the brain, 2—dysentery, 2—erysipelas, 1—scarlet fever, 1—typhoid fever, 4—disease of the heart, 1—homicide, 1—infantile disease, 1—disease of the kidneys, 1—congestion of the lungs, 1—inflammation of the lungs, 2—marasmus, 3—measles, 2—mesenteritis, 1—old age, 1—peritonitis, 2—premature birth, 1—purpura hæmorrhagica, 1—pyæmia, 1—sore throat, 1—suicide, 1—sunstroke, 1—teething, 1—unknown, 12—whooping cough, 2.

Under 5 years of age, 47—between 5 and 20 years, 4—between 20 and 40 years, 23—between 40 and 60 years, 10—above 60 years, 9. Born in the United States, 65—Ireland, 21—other places, 7.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. LXXII. THURSDAY, JULY 20, 1865. No. 25.

SIBERIAN PLAGUE, PROPERLY TYPHUS AND FEBRIS INTERMITTENS LARVATA, OR RECURRENS, AS IT IS GENERALLY CALLED.

BY DR. B. KRAUS.

[Translated from the "Wiener Medizinische Zeitung" of April 25, 1865, for the Boston Medical and Surgical Journal, by B. JOY JEFFRIES.]

WE are glad to find our views in regard to the so-called "Siberian Plague" confirmed by recent advices from Prof. Gruber, of Petersburg. Although we cannot reconcile many of his statements with our common terminology, and though the account is evidently not from a practitioner's pen, yet it is sufficient to afford us a sketch of the diseases now prevalent in Petersburg, which are typhus and febris intermittens perniciosa. It is to be regretted that the *post-mortem* account which we should have looked for was slighted, yet we are enabled to definitely make up our mind in reference to the epidemic.

It seems there are in reality two epidemics in Russia—*typhus*, of exactly what character we cannot determine from present information, i. e., whether it is an exanthematic, or, as would seem from all the symptoms, our common form, so well understood and studied; besides this there is *febris recurrens*, so called, which has not yet been recognized in Petersburg, but has in former years been diagnosticated in different parts of the country.

The principal symptoms of so-called *febris recurrens* are chills, enlargement of the spleen and liver, pulse 100–140, general languor, and the accompaniments of all febrile affections; in addition, icterus from trouble in the liver, and painful swelling of this organ. We are correct in calling this disease *intermittens larvata*, except that the chills do not occur at regular intervals, but are replaced by a stage of continued heat. The liver and spleen exhibit the same changes as in intermittent, and as nothing, according to Gruber, is found in the intestine characteristic of typhus, and we know of no disease where the abnormal enlargement of these two organs plays

so important a part, we are the more strengthened in our view. Dryness of the tongue is a constant symptom in typhus; who does not recal the red triangle on its end in typhus patients? In intermittens the tongue may remain moist and its tip red; all the symptoms may closely resemble typhus in *intermittens larvata*, and yet, under ordinary treatment, the whole disease may run through in six, eight to ten days, which is never the case in true typhus. We are never through with typhus under four weeks.

Prof. Gruber speaks of a bilious form. Those familiar with intermittent in Hungary will have observed exactly the appearances that Prof. Gruber speaks of, taken from the reports of observers of this epidemic in the various journals. Our journal has given such reliable testimony of this, that we wonder at the epidemic in Russia being regarded as a new form of disease. Hæmorrhage in the brain as a presumptive cause of death during the attack, effusions into the pericardium, are such common appearances in intermittent in Hungary; marked icterus, and death during the first attack occur so frequently there, that we must refer to the excellent work of Dr. Rezch (in Fuzitö, near Komorn) for all that has been considered characteristic of this new epidemic in Petersburg.

The various accounts of the disease in Petersburg have no resemblance to the plague. The plague, a contagious, febrile epidemic, is characterized by boils and arthraces appearing on the cheeks, neck, breast, back, or limbs. The various *plagues* of olden time and the middle ages are in no way analogous to the present Russian epidemic. The *plague* Galen speaks of in old Rome under the Emperor Antoninus, the *plague* in Athens that Thucydides tells of, what is known of the "*black death*" of the 16th century and the "*pest*" of the 17th, are as different from what has now been called the "*Siberian plague*" as heaven from earth. Neither in the symptoms of the disease, its severity, extent, number of persons affected, nor its mortality, does the present epidemic deserve the name of "*plague.*"

Epidemics must be thoroughly studied and understood to be treated and deprived of the alarm they cause. Cholera, typhus, scarlet fever, variola and even measles were much more dreaded, when no rational therapeutics were employed to control them, than now. We need only compare the lists of mortality of the earlier epidemics of cholera, typhus, scarlet fever and variola with those of the present day to see how rational medical treatment may deprive these epidemics of their terror. With all these elements that threaten society, the first necessity is a proper medical knowledge and a thorough understanding of them; and it is the duty of the authorities to take such action as will give physicians opportunity of seeing and diagnosticating them. At the present moment we are quite at ease in reference to the "Siberian plague" in Petersburg, as we know that there are men in Austria who have repeatedly observed the disease and successfully treated it.

[The remainder of the article has already appeared in our pages (see Official Account of the Russian Epidemic in No. 19 of the present volume), with the exception of the following table, giving the number of patients with typhus and recurrent fever treated in the civil and military hospitals of Petersburg, since the beginning of the epidemic to March 1, 1865.—Eds.]

Name of the Hospital.	Number of patients received.		Of these died.	
	Typhus.	Recurrent Fever.	Typhus.	Recurrent Fever.
Hospital Aboukow . . .	1315	2312	306	390
" Marie for the poor . .	1521	736	169	47
" Peter Paul . . .	558	540	51	7
" Maria Magdelena . .	453	734	92	40
" Alexander . . .	1699	821	350	101
" Kalinkin	100	10	20	2
" Ismailovsky . . .	209	1865	47	189
1st Military Hospital . . .	876	307	106	41
2d " "	173	116	26	9
Marine Hospital Kalinkin . .	92	9	11	4
Hospital of Regiment Preobraschensky	46	66	4	2
" " Moskau .	30	94	8	4
" " Grenadiers .	25	15	8	
	7097	7625	1198	836
Total.	14,722		2,034	

CASE OF SUPPURATIVE PHLEBITIS, FOLLOWED BY PYÆMIA AND DEATH.

[Read before the Boston Society for Medical Observation, June 19th, 1865, and communicated for the Boston Medical and Surgical Journal.]

By A. D. Sinclair, M.D.

January 26th, 1864.—Called upon to visit Mr. ——, æt. 60, house carpenter, whom I found ailing from a febrile affection of an indefinite character—chief symptoms, headache, slight soreness of the throat, with cough, tenderness with some swelling of the abdomen, and some pain in the extremities. He stated that four days previously he exposed himself to cold while much heated by his work. On the same day, moreover, in lifting a heavy weight, through the carelessness of his assistant, being obliged to make extraordinary exertion, a double hernia of which he had been the subject for many years was greatly increased, rendering the truss hitherto worn completely useless in controlling the constantly-protruding masses. He repeatedly, and for several days, pressed back the bowel with his hand, giving himself no little pain, and although conscious that he might be doing himself injury, neglected proper remedial means. Up to the present time he always enjoyed excellent health, being a robust and active man all his life. Now makes little complaint.

Bowels confined. Pulse 64. A cathartic was ordered, which operated moderately. On the following day, a fever mixture was given every four hours.

29th.—Complained of pain and obstruction in passing water, with increase of tenderness over the hypogastrium on deep pressure.

30th.—Seized with severe pain and tenderness along the sagittal suture. Increase of headache and dysuria. Slight diarrhœa. Veratria ointment, ʒ iss. to the ʒ i. of lard, was ordered to be rubbed to the head, and fluid extracts of buchu, pareira and hyoscyamus to be taken internally. Chalk mixture if the diarrhœa continued troublesome.

31st.—Active delirium came on last evening, in which he was with difficulty restrained; talked incessantly about his affairs, &c. This morning, pain in head and delirium passed away. Otherwise about the same.

During these days I felt uncertain regarding the case, and dissatisfied with myself, though the general symptoms were not severe; the tongue, skin and pulse not remarkable, yet it was evident, nevertheless, that there remained some latent and undiscovered cause for the obscure and indefinite condition in which the patient lay.

Feb. 6th.—Attention was directed to the calf of the left leg, of which some complaint was made by the patient on the previous evening. There was some swelling observed, and by a more careful examination the posterior saphena vein was found to be hard and cord-like, and tender to the touch to the extent of about four inches. No complaint was made of pain elsewhere, but on examining the corresponding groin for sympathetic affection of the glands, the penis and scrotum were seen to be swollen, and, on raising the former, he remarked, "that there appeared to be something wrong there." Inflammation of the veins of the penis obtained to an alarming extent, and felt as if the organ were irregularly girt with cords.

From this time there remained no doubt as to the real state of matters; that other veins concealed in the cavity of the pelvis and abdomen were also implicated, it was but reasonable to infer.

11th.—Very great pain and obstruction in passing water, the effort causing extrusion of fæces, and followed by exhaustion; abdomen tympanitic; pain in left hypochondrium, when attempting to turn in bed; phlebitis of leg increased upwards, that of penis somewhat diminished; inflammation of one of the branches of the epigastric vein, running towards the umbilicus; great tenderness on deep pressure over bladder; headache; no diarrhœa; strength failing.

12th.—Examined by rectum, which was quite relaxed, the prostate gland, and the tissues within the pelvis, as far as the finger reached, were swollen and extremely tender. Two or three leeches were applied to the perinæum, followed by relief to the dysuria.

13th.—On getting out of bed, one of the scrotal veins burst, re-

sulting in a free hæmorrhage, with some relief. Otherwise about as on 11th.

14th.—A painful red spot appeared on the inner condyle of right humerus, but no affected vein could be detected in the arm.

17th.—About the same for the past few days, except that the crural inflammation has diminished, under the use of mercury and belladonna ointment. Continues to lose flesh and strength, and is now unable to turn himself in bed. Tongue clean, and pulse generally about 60.

22d.—An abscess, with distinct fluctuation, formed on the posterior of the penis, and was found to communicate with the urethra; prostate gland large and extremely tender.

March 2d.—Copious discharge of fœtid pus from rectum for past three days, particularly on being moved in bed. A large collection of pus inside the right tuber ischii, which discharges, on pressure, into the rectum; a smaller collection of matter at junction of penis with pubes superiorly; abdomen still tympanitic. Bowels continue pretty well, though there exists a tendency to diarrhœa; pain over inner condyle of humerus still severe; nothing unusual externally, but there obtains almost complete inability to use the arm and hand of that side; no chills; hectic flush on face; pulse 84 for several days.

8th.—Copious diarrhœa for past three or four days; abdomen still tympanitic, but not tender, except on deep pressure to the right of umbilicus; occasional purulent discharge from rectum. Another small abscess formed on perinæum; arm the same; strength failing rapidly; is much emaciated; lies on back, with eyes shut; voice strong; intellect generally clear, and has been except during the severe attack of delirium early in his sickness, although occasional mild nocturnal delirium during illness; takes little food; pulse 96.

10th.—Diarrhœa continues; purulent discharge from urethra; profuse perspiration; prostration.

11th.—Diarrhœa ceased; pulse 100; gurgling of air in cavities around rectum; œdema of right hand; tongue clean; skin dry.

From this time until his death, from exhaustion, on the 18th of March, there was no particular change worthy of record.

I have refrained from giving details of treatment as the case proceeded, inasmuch as there would be but little satisfaction derived from their enumeration, consisting as they did in the continuance of quinine and iron, beef-tea, stimulants and nourishing food, administered freely.

Remarks.—1st. At the commencement of treatment of this case, it was impossible, perhaps, to decide as to the actual state of things which existed, for not until after ten days did the nature of the disease become apparent. Taking into consideration the mildness of the constitutional symptoms, the absence, one might say, of any alarming symptoms, with the existence, at the same time, of an indefinite and prostrate condition of the system, resembling typhoid fever, yet

differing from the latter in general character, it was very difficult to decide as to the proper course of treatment to pursue during the earliest days of the disease. The result might have been different, perhaps, had the diagnosis been made earlier in the disease, but it is hoped that the discussion which may ensue on the subject may aid in deciding that question.

2d. Where did the phlebitis originate? Was it idiopathic, or did it arise from injury to the herniæ in the frequent pushing back of the bowel, which was resorted to for several days, and always with more or less pain? It is evident that the pelvic veins became inflamed at a very early period of the disease, for the pain and difficulty in urinating were caused, partly at least, by the inflamed prostate; but, in addition, the perineal fossa became early involved in diffuse inflammation, if, indeed, the whole intra-pelvic inflammation was not contemporaneous. The suppurative phlebitis of the penis is believed to be of rare occurrence, and so also of the prostate gland.

3d. *Duration of the Disease.*—The patient died of pyæmia, after an illness of eight weeks, during which time there was no extraordinary constitutional disturbance. The disease was characterized by increasing emaciation and exhaustion, diarrhœa, hectic, almost entire absence of chills, clean tongue, clear intellect, and when nocturnal delirium occurred the latter was very mild. The pulse remained from 60 to 64 until about three weeks before death, when it mounted to 84, and gradually increased to 100, always fair in character. In the face of symptoms of pyæmic poisoning, at times, it was hoped that the patient might overcome the grave disease from which he suffered.

MR. SOLLY'S CLINICAL LECTURES ON SCRIVENERS' PALSY.

[Continued from page 467.]

Lecture III.

Gentlemen,—Trusting that you have not forgotten what I told you in my last lecture regarding the anatomy of the spinal cord, its groups of cells and nerves connected therewith, I will now endeavor to prove to you that these cells are frequently diseased, and that upon such disease, in all probability, the scriveners' palsy depends. Scriveners' palsy is not, so far as we know, a fatal disease; patients do not die from it, but they may die with it, and as we have not yet any recorded case of a *post mortem* after scriveners' palsy, I want you to look out for it. Nevertheless, it has been proved that these ganglionic cells are liable to disease—a disease which in its early stages cannot be recognized by the naked eye. The microscope must aid us. Thin sections of a healthy cord show all that beautiful anatomy which my old pupil, Lockhart Clarke, has so perfectly elucidated that the Royal Society have awarded him the Royal Medal.

In health the microscope shows the vesicles plump and transparent, with a distinct nucleus and nucleolus. In disease the microscope shows the vesicles no longer transparent, but more or less filled with granular matter, and the nucleus more or less obliterated. In Beale's "Archives," No. XIII., vol. iv., p. 41, you will find, from the pen of Mr. Lockhart Clarke, an admirable account of this granular degeneration. Again let me repeat that this description does not apply to a case of scriveners' palsy, and you will therefore please to understand distinctly that the account I am going to give you of granular degeneration and granular disintegration of vesicular neurine, as described by Lockhart Clarke, does not apply at the present time to scriveners' palsy. If, however, it should hereafter be proved that I am right in my theory, then also will be proved that granular degeneration in its early stage may be arrested, and that fresh and healthy cells are reproduced, if these cells are left completely at rest to perfect the reproduction of the cell structure, and not interfered with during the reproductive action by attempts on the part of the patient to use the damaged centre of nervous power—in other words, by resting entirely the group of muscles which are called into co-ordinate action by such centres.

The first case in which Mr. Lockhart Clarke made this discovery of granular degeneration of nervous tissue in connection with paralysis, is described in vol. iii. of Beale's "Archives," beginning page 1. The whole paper ought to be, if it has not already been, perused by every practitioner of medicine and surgery. I referred to the facts in my lectures at the College of Surgeons the year before last, and I was surprised to find how many even of that learned body of men were unacquainted with the discovery which had been made. It is entitled, "An important Case of Muscular Atrophy, accompanied with Disease of the Spinal Cord." I do not think we shall often see this title again. It implies that the muscular atrophy was the disease, and the condition of the spinal cord the accompaniment; whereas the disease of the cord was the primary malady, and the muscular atrophy the necessary and invariable consequence of long-continued disease of its co-ordinating centre.

The only ground upon which pathologists could base the idea of muscular atrophy consequent upon paralysis without disease of the spinal cord, has been cut from under their feet by this discovery. Hundreds of such cases have been examined, and reported to be free from disease because the disease was not patent to the naked eye. There is no longer any excuse for such nonsense. No *post-mortem* examination of the spinal cord can be considered as conclusive unless it is examined in thin slices under the microscope.

The important features of the case, and those which appear to me at all to bear upon the pathology of scriveners' palsy, are these. The patient was 65 years of age, leading a sedentary life, engaged in literary occupations. "In the end of 1855 he began to

complain of neuralgic pains in the balls of the thumbs of both hands, which before long extended to the forearms and arms. After some months he was conscious of marked weakness in the hands, more especially in the right, soon followed by perceptible diminution of size in the muscles of the thumbs and index fingers, which also became bent inwards and towards the palms as an habitual posture. All this time, while his general health was good, and his body corpulent, he made great complaints of severe neuralgic pains shooting down his arms into the hands and thumbs, and also of weakness of the back. . . . . Nothing abnormal could be detected in the organs of the chest or abdomen. The kidneys and bowels acted regularly, and apparently naturally; he had no tenderness of the spine, no headache, and his mind, when not turned on his own condition, was clear and rational."

The further history of Dr. P.'s case, up to the time of his death, in January, 1861 (the disease lasted, therefore, a little over five years), "which was preceded for a few days, and possibly caused, by an attack of acute laryngitis, is nothing more than a detail of the gradual increase in the intensity of the symptoms already noted, and the extension of the pains to the lower limbs and feet, where the sensation of intense heat and burning was constantly complained of, aggravated by the act of walking."

I shall not attempt to give you the detailed account by Mr. Lockhart Clarke of the *post-mortem* appearances, but such a very brief abstract as will suffice for my present purpose. There was no disease of the pons Varolii or cerebellum. In a transverse section of the spinal cord, at the origin of the fourth pair of cervical nerves, on the left side, in the grey matter of the cord, three lesional spaces might be seen, which were spots of granular degeneration.

The next case in which Mr. Lockhart Clarke gives us the result of his inquiries was clearly not a case of scriveners' palsy, but extremely interesting in every point of view. The case is most ably related by Dr. Thudichum in the fourth volume of Beale's "Archives," page 26, and the brief abstract which I now mean to give you must not prevent your reading the whole account with care and attention.

The patient was 45 years of age. The cause of disease was concussion of the spine produced simply by a jump, the patient coming down heavily on his heels. He was stunned at the time, confined to bed for a few days, and then appeared to get quite well. "It was, however, soon perceived that a great change had taken place in his habits. Having been extremely fond of manly sports and exercises —rowing, cricketing, riding on horseback, dancing and the like—he discontinued to take part in any of them, although he continued to go every autumn to the Scotch moors for the purpose of shooting grouse." At the age of 50—i. e., five years after the accident—"while engaged in this latter sport, he perceived that his right leg

had lost a part of its usual strength; that although he could perform with it every motion, yet he could not perform it in the manner necessary for the purpose; that he could not put the foot in the exact place where he wanted to put it." In other words, that he could will the action of the muscles of the leg, and that they would obey the will, but, the co-ordinating power being lost, he could not combine their action so as to walk.

Mr. Clarke published in the *British and Foreign Medico-Chirurgical Review* (vol. xxx., p. 219) another interesting case of paralysis, with muscular atrophy and disease of the nervous centres, which Dr. Radcliffe brought to his notice. In this case, he says, "the ordinary and inefficient method of examining the nervous centres must have failed to detect minute structural changes upon which the wasting palsy was actually dependent, and would, perhaps, have resulted in recording the case as one of simple muscular atrophy. In this case the condition of granular degeneration had gone on to vesicular atrophy. The cells had shrunk; none of them were larger than the *nuclei* of the surrounding healthy cells; the majority were much smaller, without any traces of nuclei or distinct granular contents. These shrunken cells consisted of irregularly-stellate and apparently membranous bodies, which, in some instances, seemed shrivelled sheaths of healthy cells, or like radiating portions of the connective tissue."

Amongst other proofs that might be adduced in favor of my view, that the seat of the disease is central in the spinal cord, is the fact that the use of the left hand in writing, instead of the right, will induce uncomfortable feeling in the latter. The explanation of which I suppose to be that in writing or drawing the action of the muscles of the left hand, the will having travelled by the conducting fibres of the spinal cord from the brain to the group of cells in the left half of the cord, these cells, on being called into action, excite their neighboring cells, through the medium of the transverse commissure, in the right side of the cord—i. e., those which co-ordinate the muscles in the right, such excitement being manifested by the uncomfortable feeling described. One of my patients, when I spoke to him about the use of the left hand, said he would continue to use it if I wished, but he thought it would be better if he did not use either. He said :—"If I write with my left hand, I feel an indescribable tingling feeling in the damaged hand, which does not subside on leaving off writing;" for instance, he continued to feel it whilst talking to me, having been writing half an hour previously. Occasionally he has the same kind of sensation in the right leg. He also says that he has had less of this discomfort since he has held the paper, on which he has to write, by strong clips instead of holding it steady by the right hand, and then, instead of keeping the right hand before him, putting it out of sight behind the body.

Regarding treatment, Virchow says the therapeutical indications

to be followed in the treatment of these palsies are very doubtful. "In writers' cramp the application of all means of healing has proved fruitless. Neither narcotics, nor stimulants, nor tonics, nor nervines brought any advantage; just as little did counter-irritants, embrocations, electricity, or baths of any sort. Where rheumatism was the cause, Russian vapor-baths, cold douche, electricity, and embrocations, with oil of turpentine, were able to remove the complaint. The cutting through of the long muscle of the thumb was tried with some result by Stromeyer in a case in which writers' cramp was conditional on this muscle. Dieffenbach performed the cutting through of the muscle several times without being able to arrive at anything by it; Langenbeck, with a passing improvement. Nothing therefore remains but the application of different mechanical appliances which make writing possible. Many such are known, designed by Froschel, Cazenave, and others. One patient helped himself by means of placing the pen in a piece of wood bored through with holes, which he grasped with the whole hand, and so could regulate in writing.

As regards treatment, Romberg *(loc. cit.*, p. 323) says—"The treatment hitherto pursued, both local and general, has been invariably ineffectual, so that the patients generally ceased from all attempts at cure, and remained satisfied with mechanical contrivances, the object of which was more or less to cause a pressure upon the skin and the subjacent muscles. Stromeyer also applied the principle of division of the muscles to the cure of the writers' cramp, and in one case a brilliant result justified the antispasmodic reputation of tenotomy. As early as the fourteenth day after the subcutaneous division of the tendon of the flexor longus pollicis, the patient was able to resume his pianoforte-playing and to write. On the other hand, it is to be observed that the operation was perfectly ineffectual in several patients upon whom Dieffenbach operated."

The following passage regarding treatment in the relation by Drs. Adamson and Bell, of the case of Dr. P——, already referred to, is, I think, instructive.

"As regards treatment, it may be mentioned that he made a long-continued trial of the following remedies—viz., iodide of potassium with sarsaparilla, strychnine, quinine, valerianate of zinc, phosphate of zinc, arsenic, tinctures of lobelia and lupulus, of cantharides, ergot of rye, actea racemosa, with various mineral acids. Throughout the progress of the disease he employed occasional, and for the last two years regular, preparations of scammony and calomel. He had sedatives in every variety of form, externally and internally, and for the last three years took Battley's sedative solution every night, consuming about thirty ounces each year, besides trying chlorodyne, chloric ether, conium, henbane, lupulin, &c. &c. He tried galvanism and regular friction or shampooing of the limbs, wet bandages, &c. Subcutaneous injection of morphia was repeatedly tried when pain was concentrated in any individual spot.

"Amongst other systems of treatment, he made a lengthened trial of the waters at Aix-la-Chapelle, and visited also several other German baths, including a water-cure establishment. He also placed himself for a time under a quack doctor, whose grand specific was systematic friction and kneading of the spine. These plans of treatment he discontinued only on being thoroughly convinced that they did him no good.

"Counter-irritation along the spine was also had recourse to, but each and all without the experience of any, even temporary, relief. The diet was always generous, and with a liberal allowance of stimulants."

No mention is made of complete and entire rest of the palsied hand when the disease first made its appearance. Believing as I do that this is the right course to pursue in the treatment of such cases, the fact that the employment of rest was not one of the remedial agents which so signally failed should encourage us to employ it in any similar case.

My own experience, then, in the treatment of these cases is very decided: rest—entire rest from the occupation that has produced the disease. If the disease is recognized early, then two months' entire rest will arrest its progress; at the end of that time strychnine is of service, but it is injurious when given in the early stage of the disease, and before rest. During the time of rest the health should be sustained and improved in every possible way. Fresh bracing air—mountain air if attainable—is of more service than all the tonics in the world. As regards tonics, they must be varied to suit the peculiarities of each constitution. Zinc, iron and quinine are the tonics on which I rely most.

The following is one of the most striking cases of paralysis I know of, induced suddenly by little more than an hours' continuous strain upon a nervous centre, confirming all that I have said regarding the controlling and co-ordinating power of the spinal cord:—A gentleman got into the five o'clock express train for Brighton. He was no sooner seated than he felt a strong desire to have the bowels relieved; but there was no help for it—the train started, nor did it stop till it reached its destination at a quarter past six o'clock. All this time the desire to go to stool increased more and more, but he restrained it successfully by a violent effort. The moment the train stopped he sprang out of the carriage, when the sphincter ani relaxed, and the contents of the bowels were poured out into his clothes. The curious part of the case is, that he became paraplegic. The spinal cord had been over-exerted, exhausted, and paralyzed by the long-continued effort. In this case the brain, from which I suppose all must admit that the will emanated by which he desired to control his sphincter, did not give way. His intellect was not impaired, and the whole muscular system was not paralyzed, only that portion which is supplied by the lower part of the cord. I regard

this as identical in its pathology to scriveners' palsy, only that the destruction of the nervous centre was sudden, not gradual. I do not know what treatment was adopted in this case, but, reasoning from analogy, I should have advised complete rest; that some arrangement should have been made to prevent his ever having to control the action of the bowels if he had retained in any degree that power.

Having told you all I know, or fancy I know, concerning this palsy, and all the speculations I have made regarding the pathological changes produced by or productive of the disease, I will ask you to carry on the subject. If you meet with any cases amongst the poor classes of our working men, send them here, and I will give them a bed and do the best I can to cure them. If you hear of any such cases—and mind you inquire for them when you go into the country—get your medical friends to watch them; and, if they can obtain a *post mortem*, ask them to send me the cervical enlargement of the cord (if they cannot obtain the whole), and we will make sections after the plan recommended by Lockhart Clarke, and test the validity of my views respecting its morbid anatomy.—*Lancet.*

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE PROVIDENCE MEDICAL ASSOCIATION. BY W. H. TRAVER, M.D., SECRETARY.

Tubular Pregnancy.—Dr. Morton reported the following case of tubular pregnancy, and exhibited the specimen. He was called on the 13th of May to see Mrs. A., who was said to be in a fit. On arriving he found her pulseless. She was well in the morning, grew sick towards noon, vomited, went out, fell upon the side walk, was carried into the house and died at 3 o'clock, P.M. of the same day. On making a post-mortem examination a male fœtus was found, and two quarts of blood in the abdominal cavity.

The fœtus occupied the left Fallopian tube. The placenta was still attached. The womb was enlarged. The patient always enjoyed good health, and had had no vomiting or suffering during the earlier months of pregnancy. The menses were suppressed. She was delivered of a healthy child in 1862 at full term. Presentation normal. The hæmorrhage occurred from the rupture of an artery.

Retropharyngeal Abscess.—Dr. Parsons reported the following case. The subject was a man, aged 52. There was no syphilitic disease, and no positive proof of scrofula, but several members of his family are said to have died of phthisis pulmonalis and tabes mesenterica. He was not aware of having received any local injury, but had been subject to bronchial trouble for years.

About thirty years ago he was salivated three or four times in the treatment of an injury, and ascribes his ill health to that. Some two years ago he experienced for the first time some difficulty in turning his head, with contraction of the muscles of the back of the neck.

During the previous winter he was sick with "lung fever," with relapses. Throughout this period the difficulty in turning his head continued. Within two months the symptoms have increased, and about six weeks ago swelling began in the throat, impeding deglutition. Some two weeks since Dr. Eldridge punctured it and let out about half a drachm of pus, giving some relief, and enabling him to move his neck, and swallow with less difficulty. Deglutition has been so much impeded that when he attempted to swallow liquid it returned through the nostrils. The abscess was again punctured on the 27th of April, and May 1st, no pus being obtained. The man has lost flesh and strength, not having fully regained it since his previous sickness. He now has swelling on the outer portion of the right side of the neck, and over the transverse processes of the third and fourth cervical vertebræ, accompanied with redness, pain, and tenderness.

At times the pain extends to the occiput, and down the side of the neck. There is also swelling on the right side of the parietes of the pharynx, pushing forward the posterior pillar. No fluctuation could be felt. The treatment consisted of steam, gargles and iodide of potassium.

Typhus Fever.—Dr. Perry briefly reported three cases of the above disease occurring in one family. The cases were strongly marked, the skin being covered with the characteristic eruption peculiar to this disease. The two first cases, a male aged 50, and a female aged 25, proved fatal. They were treated in the usual manner with alcoholic stimulants, quinine, camphor and ammonia with generous diet.

The third case, a female aged 18, had symptoms similar to the previous cases. The treatment in this case consisted of ergot with generous diet. In forty-eight hours after I commenced the use of ergot there was a marked improvement. She made a rapid recovery.

How much the ergot had to do the with the favorable termination of the disease, Dr. Perry did not profess to say. The disease originated with a returned soldier.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JULY 20, 1865.

Death by Sewage.—Much has been said and written within a few years concerning the utilization of the sewage of large cities, and constant efforts have been made in England by men of science to convince the public that they were turning into the sea that wealth which should enrich the land, and were sending to distant islands in the Pacific for the very materials they were so largely wasting at home. Popular opinion, which had been previously taught by the same social reformers to regard surface drainage and leaky sewers as sources of the most virulent poisons, was slow to accept the new theory of the harmlessness of scattering sewage broadcast over the land, and in spite of them the work of converting the Thames into an immense cloaca for London went on. Gradually, however, the great cost of artificial and imported fertilizers and the inefficiency and scant supply of domestic manures induced a few cultivators to make trial of

liquid sewage, the result of which, as far as the crops are concerned, has been, we believe, all that was promised. The employment of the same material in a dry and concentrated form here and in other countries leaves no doubt as to its value as a fertilizer, even when diluted by the addition of the immense quantity of water employed for domestic purposes in a large city. If it is also proved to be harmless, the important question of the proper disposal of sewage would seem to be answered at last, by the sacrifice, perhaps, of some very old and strong prejudices, but to the immense advantage of our deteriorating soil.

Unfortunately, however, we know as yet far too little of the laws of nature's great out-of-door laboratory, of the delicate conditions which determine the conversion at one time of effete and decomposing materials into the fertilizing ammoniacal compounds, at another into the invisible and deadly miasm, to warrant the latter conclusion. Two points seem to be well established ; that sewage is harmless and inoffensive when covered by and mixed with large bodies of moving water, but that when stagnant or left to decompose upon banks or flats it remains so no longer. Within the past few weeks the inhabitants of the western portion of our city have had ample opportunity of verifying the truth of this statement, for a southerly wind has filled their houses at times with an atmosphere fouler than the most concentrated odor of a cess-pool. Frequently have we been obliged to close our windows at night, and one of our patients informs us that both she and her husband were so powerfully affected by it as to be obliged to vomit repeatedly. We are told by the authorities who have charge of the city smells that the source of this pestilence-breeder is the upheaval of the mud from the bottom of the Back-bay basin, into which the sewage of a large part of our outlying territory has been drained for years, produced by the process of filling now going on. If this be the case, the health of the city requires an immediate stop to be put to such operations until cool weather shall render them no longer dangerous.

It will be remembered that in our last number but one we published an account of 31 cases of dysentery and 20 deaths, occurring in an English county asylum containing but 250 persons, which were caused, beyond question, by the irrigation of an adjoining field with the sewage of the institution. We should not draw the hasty conclusion from this instance that sewage can never be employed for such purposes. It teaches us, however, that there are many conditions to be observed and much still to be learned before we can settle this vexed question. One of the London journals offers some further explanation of the circumstances of the case, and the following comments upon it :—

"Sewage, to be harmless, must be absorbed by the earth. It requires a deeply porous soil, like that mentioned by Mr. Rawlinson in Lombardy, where beds of sand and gravel alternate, so that the water when it has lost its manure elements may find its way steadily downwards. But the land at Carlisle was not porous ; it did not absorb ; the drains which had been laid down became blocked, and the water, instead of passing deep through porous beds, stagnated in the hollows of a clay surface thinly overlaid with sand, and returned in pestiferous streams to the Asylum. We fully accept Dr. Clouston's *dictum*, that it is unsafe to apply sewage to land with a stiff clay subsoil

within three hundred yards of human habitations, without the most deep and thorough tillage, and every other precaution, both with the land and the sewage, to ensure absorption by the soil, and uninterrupted drainage of superfluous moisture.

"Now for a few words on sewage difficulties generally; because in this, as in many other cases, now that the general principle is accepted, people think there is no need of further thought, as if the details, the means of doing a very ticklish thing in such a way that it shall not be a nuisance, would come of themselves. It is not a very delicate subject, though a necessary one, so we may as well hold our noses, and plunge *in medias res*.

"Assuming that the *water* closet is a necessary evil in towns—though for villages, and for all cases where there is not a perfect water-supply, the *earth*-closets of the Rev. Mr. Moule seem preferable—the first question is, what shall be the immediate destination of the sewage, a river or a tank? If a river, it is of the utmost consequence that the sewage arrive quickly and before decomposition. As Mr. Rawlinson and Mr. Chadwick have shown, at Salisbury and elsewhere, *putrid* sewage, which has been festering in cesspits, badly-constructed sewers, &c., kills fish and befouls rivers. Fresh sewage feeds fish; the trout haunt the outfall of the sewer and become—so we are credibly informed—so fat as to fry without butter. Yet to send sewage into rivers is a nasty and wasteful process, and very unsafe if water be taken for drinking purposes. True, as Dr. Letheby and Mr. Rawlinson affirm, water in motion becomes purified, by the growth of animals and vegetables, the action of the air, and the absorption of the banks and bottoms of rivers; but the principle of turning even fresh sewage into rivers is bad, and that of foul sewage worse.

"Leaving the rivers, then, how is sewage to be applied to land? and here we have to notice that distressing habit of jumping to conclusions, of dogmatizing on general principles, and ignoring details, that want of a practical way of dealing with subjects which makes sanitarians and abstract sanitary science, though founded on truth, so much the laughing-stock of men who have to put science into practice.

"Now, we blush to say it, but some sanitarians really talk as if all that was required was to let the soil pipe of the house empty itself on the nearest lawn, or field, or garden. It is said, for instance, that during a sewage squabble at the watering place of Bournemouth, it was coolly proposed that the sewage of houses a very few yards distant should be emptied on a small field or pleasure ground right in the middle of the town.

"On this point we are glad to find that two of the ablest writers on the subject—Dr. Spencer T. Cobbold, the well-known helmintholo-gist: the other, not a philosopher, nor natural historian, but one who is actually in the habit of applying sewage—Mr. William Menzies, Deputy-Surveyor of Windsor Forest and Parks, speak out and give us some wholesome truths.

"It must be recollected that the *stercus humanum* is greedily explored by numbers of animals. Dr. Cobbold shows with great force the dangers of a wide-spread invasion of disease due to parasites—from the old, familiar tapeworm, in its various forms, to the new Bilharzia, which invades the kidneys, and which has been detected here

in the bodies of men and monkeys by the acuteness of Dr. John Harley. And Mr. Menzies, like a practical man, shows the danger of putting on the surface of land any sewage containing solids capable of lodging, festering on the surface, instead of soaking into the earth."

FOREIGN MEDICAL INTELLIGENCE.

Honorary degrees are to be conferred upon the following men of science at the approaching jubilee of the Vienna University :—Baer, Baum, Baumgartner, Dubois-Reymond, Bruns, Bunsen, Carus, Chelius, Donders, Frerichs, Graefe, Helmholtz, Langenbeck, Liebig, Middledorpff, Mitscherlich, Pettenkofer, Purkinje, Reichert, Ruete, Scanzoni, Schönbein, Virchow and Weber.

A senator of Lubeck and all his family, consisting of seven persons, have been poisoned by smoked and uncooked ham, which was found to be loaded with trichinæ. Four members had died at the last report.

Revaccination in the Prussian Army.—During 1864, there were vaccinated, or revaccinated, 69,560 soldiers in the Prussian army. Of these 59,396 had distinct, and 7,265 indistinct marks, and 2,899 no mark at all, of previous vaccination. The results of the vaccination were, 43,596 regular, 10,505 irregular pustules, and in 15,459 no pustules at all. Of the latter kind, on revaccination, 4,897 succeeded, and 10,392 were followed with no results. From this it appears that, in 69,550 men, the vaccination produced regular pustules in 48,493, or in about 70 per cent.—*Brit. Med. Journal.*

The medical profession has sustained a loss, which will be severely felt, by the sudden death of Dr. Robert Fergusson, of King's College Hospital, after an illness of only a few hours' duration. Dr. Fergusson attended Her Majesty in all her confinements as physician, was principal physician to King's College Hospital, and Professor of Midwifery at King's College. He was in his 65th year.

The following cure for drunkenness is practised in Holland. The patient is shut up in a room and debarred all communication, except with his physician. As often as he pleases, spirits (brandy, whiskey, gin, &c.) are given him, but mixed with two thirds water; so, also, are all other drinks, as well as beer, coffee, or wine, mingled with one third water. The various kinds of food, too, that are furnished him—bread, meat, &c.—are all prepared with brandy, consequently the patient is in a state of continual intoxication. This lasts about five days; at the end of that time, he asks with entreaty for other nourishment, without his request being complied with, and that until his organs absolutely abhor any alcohol. The cure is complete, and from this period the very smell of spirits produces on him almost the effect of an emetic.

Cholera.—The cholera is on its travels—that fierce and pitiless plague, which has its residence in the East, but sallies forth at periodical intervals to decimate West, North and South. From time to time we hear of the visitation in distant places—deaths by wholesale in Central Asia, deaths in Southern Russia, regiments disbanded by death on Indian marches, and rivers choked with corpses in the islands of the Eastern Ocean. The last Red Sea news brought word

that Mecca and Medina are this year vast lazar houses of cholera-smitten victims, the pilgrims perishing all along the road to the shrines from Jeddah and the southern ports, and Sheiks who had come to kiss the Kaaba turning back in horror, with their trains, to succumb in tents and houses where they had shut themselves up. Already Egypt has been reached, and the fellahs there are perishing by thousands, so much so that the Italian and French harbors are shut against vessels from Alexandria. Marseilles has kept all the mail boats in quarantine ever since two moribund passengers were landed in the Joliette ; and at last we ourselves have been obliged to confront a peril that cannot be disregarded. The newspapers and letters which went out of the General Post Office on Tuesday last were sent in boxes instead of bags, to prevent infection being carried out of Egypt by the mail passing through the country. That, indeed, is not a precaution on our own behalf, but it will also be observed with regard to the overland despatches coming homeward. All the instances we enumerate, and others which might be cited, prove that the cholera is on its periodical march, and without ascribing to the same source the outbreaks in North Russia, Poland and Prussia, it is at least possible that the year may be signalized by the invasion of that enemy which patriotism and courage cannot keep out of our island.—*London Telegraph.*

The Food of Man in Relation to his Useful Work.—A few evenings since, the Professor of Chemistry at Edinburgh, Dr. Lyon Playfair, discoursed at the Royal Institution of London on a subject particularly interesting to the scientific physician, and to which, in some of its aspects at least, allusion has already been made in this journal. Dr. Playfair entitled the subject of this lecture "The Food of Man in Relation to his Useful Work." The chief object of the lecturer was to examine the function of nitrogenous ingredients of foods as a magazine of force for the production of dynamical effects in the animal body. The consideration of the latter as a machine and of the food in the light of fuel supplied, has already engaged the attention of scientific men, and to it we have previously drawn attention. Rumford, Joule, Mayer, Helmholtz, Dumas, Hern, Fick, and Carpenter have written upon it ; but all of them have worked upon food in its aggregate, applying their calculations to the total carbon and hydrogen contained in it, without discussing the influence exerted by its separate constituents in the production of force. The Rev. Dr. Haughton of Dublin, however, has gone further. He has endeavored to find in the urine the representative of the mental, vital, and mechanical work of the human body, and gives the following equations :—

Opus mechanicum, or 150 lb.
raised one mile = 136·5 gr. of urea.
" *mentale*, or five hours of
study = 217 "
" *vitale*, ... = 297 "

Now Dr. Playfair assumes (for reasons we cannot enter into here) that Dr. Haughton cannot have meant these equations in the mathematical sense of equality, but only in the general sense of representation. He is, therefore, obliged to class Dr. Haughton with those in-

vestigators who consider that the transformation of the nitrogenous tissues is insufficient to account for the dynamical movements of the body. Under these circumstances Dr. Playfair undertook to consider the subject entirely anew. In doing so he arranged the discussion under three divisions. Under the first, he sought to ascertain the amount of food necessary for mere subsistence without exercise; to determine the amount required for complete health, with moderate exercise of from five to seven miles daily; to fix the amount suited for active work, such as may be represented by a man walking twenty miles daily continuously; to find the amount of food consumed by laborers with very arduous occupations, such as navvies engaged in railway construction. Having ascertained these preliminary facts, which may be said to be altogether independent of theory, the Professor passed to the second division, under which was discussed whether there be sufficient potential energy in the nitrogenous tissues or of the food representing them, and in the oxygen required for their transformation, to account for the dynamical actions within or without the body. It was next inquired whether the fatty and amylaceous or saccharine ingredients of food are employed in this mechanical work. These points having been disposed of, the third division was entered, under which it was considered whether the excretions of urea and uric acid per vesicam are sufficient representatives of labor performed. Finally it was sought to be ascertained what is represented by the nitrogenous materials excreted per anum. To a few only of the many important generalizations arrived at by Dr. Playfair can we here make allusion.

It was shown that we must look to the plastic ingredients of food as exponents of dynamical action, both internal and external to the human body. When we contrast the useful work of a steam-engine with the potential energy supplied to it, the economy of force on the part of the man appears surprising. Even on the rough mode of calculation available to Scoresby, Joule, Dumas, and Helmholtz, before our knowledge of dietetics had enabled us to consider the question in a more precise way, the relative economy of the human machine excited surprise. And yet it is now known that our demand for economy is much greater than was then supposed to be necessary, and that we actually require that more than half of the potential energy should be converted into useful work. Numerous facts prove that transformation of muscle through the agency of oxygen is the condition of muscular action. Most likely intermediate products are formed before the final forms of carbonic acid and urea are reached. If these graduated changes take place in the muscle itself, the same amount of potential energy will be available as there would be if the simplest forms of oxidation were reached at a bound. If lactic acid be the intermediate product of oxidation before carbonic acid, its passage into the latter must be very rapid, for that is constantly eliminated from a muscle during its action. And if we thus constantly find that carbonic acid, the highest oxidized form of carbon, is manifested in the substance of muscle during its activity, it is certainly to be expected that the less oxidized form of amido-carbonic acid should be simultaneously produced. In those cases of disease where elimination of urea is retarded it is found abundantly in the muscles. Thus, in cholera, especially in the muscles which have been severely cramp-

ed, urea is detected with ease. In this disease there is a small amount of chloride of sodium in the blood, and its solvent action on the urea is thus reduced. In anæmia, also, it can readily be extracted from muscular substance. From the considerations entered into, it must be held that Liebig was amply justified in viewing the non-nitrogenous portions of food as mere heat-givers. They never can act vicariously for albuminous bodies as tissue-formers, although tissues may and do evolve heat by transformation when required to do so. That heat-givers do operate indirectly on the waste of tissues cannot be questioned. They facilitate transformation by keeping up animal heat and by promotion of the circulation. Cold-blooded reptiles become more active when artificial warmth is supplied to them, and conversely warm-blooded mammals become more sluggish when the heat of their bodies falls, as during hybernation. Such dependencies of different groups of food, acting co-ordinately, are incessantly found, but nevertheless each group has its own specific work to perform.

There cannot be longer any question that all the nitrogen of the ingesta is to be found again in the urine and fæces. When a large amount of animal diet is the chief source of food, exercise becomes a necessity in order to waste the tissues for the support of respiration and other vital movements; without it the animal soon loathes the food. This is the experience not only of carnivora, but also of man. Darwin tells us that when in the Pampas he lived tolerably well on a meat diet, "but felt that it would only agree with him with hard exercise." We are informed that the Guachos, who live upon meat, eat largely of fat; probably not only for respiratory food, but also as a protection against unnecessary muscular waste, as may be explained. Sir John Richardson observed the same fact in his Arctic travels, having noticed "that when people have fed for a long time upon lean animal food, the desire for fat becomes so insatiable that they can consume a large quantity of unmixed and even only fat without nausea." The hyena in confinement wastes its tissues by moving backwards and forwards incessantly in its den, and thus is able to consume its animal diet. All this shows that the normal function of nutrition is to build the plastic food into tissues, to be transformed by internal and external dynamical work into carbonic acid, water and urea. The measure of the digestive or assimilative work in a man of healthy digestion is to be found in the nitrogen of the fæces. One-twelfth of all the plastic food taken by a man is converted into digestive ferments, and then is excreted per anum. Finally, we would add that the Edinburgh Professor is not inclined to agree with those physiologists who consider that these "ferments" secreted from the blood are the degraded products of tissue-waste in their passage of urea. On the contrary, he believes them to be merely albumen of the blood the oxygenation of which is incipient, so as to make it ready to build up tissue, as in its passage to fibrin. Hence, when there is an extensive demand on the blood for tissue-material, as in the case of work in excess of the food supplied (for an instance, as observed by Dr. Edward Smith with over-worked prisoners), there the amount of the alvine dejection diminishes.—*London Lancet.*

Maine Medical Association.—The thirteenth annual meeting of the Maine Medical Association was held in Portland on Tuesday and

Wednesday, June 20th and 21st. Dr. Monroe, of Belfast, delivered the introductory address. Dr. Western, Chairman of the Committee on Necrology, presented his report, by which it appeared that three members of the Association have died during the present year, viz., Dr. W. R. Richardson, of the U. S. Navy, Dr. T. H. Breslin, of the Army, and Dr. Luke Hill, of Biddeford; and all of them have perished from diseases contracted in the service of the Union. Memorial resolutions in regard to these members were passed unanimously.

Tuesday evening was devoted to the discussion of the following topics :—"What has occasioned the radical change of treatment within the last quarter of a century? Has the type of disease changed, or is it owing to hereditary intermarriage, mode of living and influences, including former improper treatment, by which the constitution of patients at the present time is broken down, and does not require the heroic treatment formerly indicated and used?"

On Wednesday, reports of interesting cases were made and discussed. The various subjects presented during the session were of great interest to the profession, and were listened to with close attention.—*Med. and Surg. Reporter.*

The exercises connected with the graduation of the medical class of the University of Vermont took place recently in Burlington. The graduating class numbered thirty-two.

The annual commencement exercises of the Long Island College Hospital took place in Brooklyn on the 29th ult. Dr. Mason, after a few introductory remarks, conferred degrees upon fifty-two graduates.

The Medical Society of the State of Ohio met at White Sulphur Springs on the 21st of June, and continued in session three days.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, JULY 15TH, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	48	46	94
Ave. mortality of corresponding weeks for ten years, 1853—1863,	39.6	34.8	74.4
Average corrected to increased population - - - -	00	00	82.23
Death of persons above 90 - - - - - - - -	0	0	0

PAMPHLETS RECEIVED.—The Eastern, or Turkish Bath, with its History, revival in Britain, and application to the purposes of Health. By Erasmus Wilson, F.R.S. With Notes and Appendix, by M. L. Holbrook, M.D. New York: Miller, Wood & Co.—Transactions of the Vermont Medical Society. Session of 1864.

DIED,—At South Natick, July 15th, Dr. Stephen H. Spalding, aged 76 years.—At Spencer, July 1st, Dr. Edward C. Dyer, aged 50 years 4 months.—In Roxbury, 19th inst., Dr. Charles M. Windship, 56 years 3 months 26 days.

DEATHS IN BOSTON for the week ending Saturday noon, July 15th, 94. Males, 48—Females, 46. Accident, 2—apoplexy, 3—congestion of the brain, 2—disease of the brain, 1—inflammation of the brain, 2—cancer, 2—cholera infantum, 15—cholera morbus, 3—consumption, 16—convulsions, 4—diarrhœa, 4—dropsy of the brain, 4—dysentery, 7—gastritis, 1—disease of the heart, 1—infantile disease, 3—intemperance, 1—disease of the kidneys, 4—inflammation of the knee-joint, 1—disease of the liver, 1—congestion of the lungs, 1—inflammation of the lungs, 2—marasmus, 3—paralysis, 1—puerperal disease, 1—rheumatism, 1—scrofula, 1—stricture of the urethra, 1—smallpox, 2—sore throat, 1—tabes mesenterica, 1—unknown, 1—whooping cough, 1.

Under 5 years of age, 43—between 5 and 20 years, 9—between 20 and 40 years, 20—between 40 and 60 years, 11—above 60 years, 11. Born in the United States, 68—Ireland, 18—other places, 8.

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THE COMPARATIVE MERITS OF THE NITRATE OF SILVER AND SULPHATE OF COPPER IN CERTAIN FORMS OF CONJUNCTIVITIS.

By Edward G. Loring, M.D.

[Communicated for the Boston Medical and Surgical Journal.]

Of all the therapeutical agents which the materia medica contains, perhaps there is none which, as a topical remedy, has been more immoderately praised, on the one hand, for its alleged virtues, or more severely censured, on the other, for its alleged injurious properties, than the nitrate of silver. This diversity of opinion, as would be naturally inferred, exists in a very marked degree among those who have paid particular attention to diseases of the eye, since it is in these diseases that it is most commonly, or at least very frequently, employed, and where, consequently, its good or bad effects, as they are most manifest, are more easily recognized, and therefore more remarked upon.

Now as this difference of opinion is founded, not on theory, but on the different results which have followed its application to the same class of disease; and as the remedy in both cases was the same, it is reasonable to infer that the difference of result was due not to the remedy itself so much as to the manner in which it was employed; and that this difference in the mode of application is the true explanation of the success which attends its use in some cases and of the ill effects which follow it in others.

In order to understand the therapeutical effect of any drug, and to obtain its most beneficial influence on the one hand, and avoid its injurious effects on the other, it is necessary to take into consideration the anatomical and physiological nature of the part to which the remedy is to be applied, when in a state of health—then the chemical and physiological properties of the remedy and what effects follow its application to the healthy tissue. These two questions having been decided, it remains then to observe what anatomical and physiological changes have taken place in the part under the morbid action, and to determine, as far as possible, how far these abnormal conditions are influenced by the remedy proposed.

It is this method of investigation which I propose to follow, as far as I am able, in considering the effect of nitrate of silver when applied to the conjunctiva.

The mucous membrane of the eye is similar to other mucous membranes in structure. Though a perfectly continuous membrane, extending from the free border of the upper lid to that of the lower lid, it may be still divided, for convenience of description, into three parts, according to the region which it covers, viz., the conjunctiva of the lids, or palpebral, that of the cul-de-sac, and that of the globe. According to the most recent investigations, the conjunctiva may be considered as composed essentially of two parts—(1) a superficial portion, the epithelium; (2) a deeper portion, consisting of an uniform couch of cellular tissue, which, from the manner in which its elements are arranged, is called the papillary body.

The mode of union between the papillary body and the tissues lying beneath it varies in different regions. Over the tarsal cartilages it is connected by a thin but close layer of cellular tissue, which permits but a small amount of extension, while in the cul-de-sac, the cellular tissue being arranged in the form of a net-work of large meshes and of a loose construction, the conjunctiva in this region is capable of being greatly extended, though, at the same time, it possesses but a slight degree of elasticity. The papillary couch, or basement membrane, grows thinner and thinner as it advances over the globe until just before it reaches the cornea, when it becomes, with the exception of a sort of fold known as the conjunctival ring, an exceedingly thin layer of cellular tissue with no distinct papillæ, merging gradually into the substance of the cornea. The papillary body, as a whole, is composed of a firm layer of cellular tissue, which gradually fuses itself, with no defined limits, with the subconjunctival tissue beneath. On that portion of the tarsal cartilage which is nearest to its free border the papillæ are hardly visible; towards the posterior border of the cartilages they become more prominent, while in the cul-de-sac, though they are larger at their base, they are not so much raised above the level of the surrounding tissue. The papillæ themselves which compose the papillary body are formed of simple cellular tissue and possess a considerable degree of solidity. The vessels of the conjunctiva are very numerous, the capillaries forming an irregular network of curved vascular loops, which extend over the free surface and within the papillæ.

Besides the anatomical structures above mentioned, the conjunctiva, as a whole, contains many others, such as lymphatic vessels, acini, and Meibomian glands, nerves, &c., a minute description of which, although they must necessarily play a most important part in any condition of the conjunctiva, either normal or abnormal, is not necessary for the purposes for which this article is written. In regard to the sensibility of the conjunctiva, it will be sufficient to say

that the portion which covers the globe, owing to a greater distribution of the nerves, is the most sensitive, while at the same time it is the least vascular.

It is very doubtful whether the vessels of the papillary body of the conjunctiva, in a normal condition, empty any perceptible amount of serous liquid into the conjunctival sac, as often happens in pathological conditions, after the partial elimination of the epithelial layer, as, for example, in blenorrhœa. Probably the network of loop-shaped vessels, situated very near the surface of the mucous membrane, is necessary in order to facilitate the reproduction of the epithelial cells in proportion as they are eliminated, and while these vessels furnish the albuminous material necessary for this, they could not pour out, at the same time, a notable quantity of aqueous fluid, because this liquid would constantly wash away the cells of new formation.

The epithelial cells decomposing themselves at the surface of the conjunctiva form a viscous liquid, with some amorphous granules, which, in part only, contain fat and constitute essentially what is called the mucous secretion of the conjunctiva.

Such is the anatomical arrangement of the conjunctiva in a state of health. It now remains for us to consider the changes which take place under morbid influences, and in what manner the therapeutical agent which we have under consideration influences these morbid conditions.

Inflammation of the conjunctiva, or conjunctivitis, may vary in degree from the slightest congestion of the vessels to an intensified inflammation involving the deeper structures, accompanied, or followed by, an abundant purulent discharge. It is to this latter condition, known generally as purulent ophthalmia, that our attention will be chiefly directed, for it is to this condition, in its different degrees, that we believe the virtues of the agent under consideration to be chiefly adapted. It is often very difficult to determine exactly the difference between purulent conjunctivitis and acute catarrh, and, in the absence of any anatomical proofs which would enable us to separate the two, we are forced to consider one but an aggravation of the other. Still, though this difference be one of degree and not of kind, there are generally symptoms accompanying each variety which enable us practically and for therapeutical purposes to distinguish one from the other, and so determine the condition under which our remedy is to be applied.

Purulent conjunctivitis differs from acute catarrh inasmuch as

(1.) The injection of the vessels and the serous infiltration is much more marked in the former than in the latter.

(2.) The prominence and turgescence is greater.

(3.) The quantity of a purulent secretion is much more abundant.

(4.) The complication on the part of the cornea is very frequent in the purulent, very rare in acute catarrh.

Another most important distinction between these two varieties of the same disease, is the seat of the inflammation and the character of the secretion. The inflammation in acute catarrh is a superficial one, and is characterized by a more or less rapid elimination of the most external layers of the epithelium. Under the unnatural stimulus of the morbid action successive layers of new cells are too rapidly produced to admit of their being completely formed, and in the place of fully-developed epithelial cells we find a large quantity of globules of mucus or of pus, according to the degree of development, the pus-globule being but the rudimentary stage of the mucous, and the mucous that of a true epithelial cell. But in purulent conjunctivitis the inflammation is greater in degree and no longer affects the conjunctival tissue alone, but extends to the subconjunctival ones, and the rapidity of the formation of new cells, in order to replace those which have been destroyed by the morbid process, is in proportion to the extent of the disease and its violence. From this it results that the quantity of undeveloped cells, globules of mucus and pus, will predominate over the more fully developed ones, and these undeveloped cells (and the more rapidly they are formed the less developed will they be) mixing themselves with the liquid, which is abundantly poured out by the diseased mucous membrane, constitute the secretion which is characteristic of the disease—a secretion which is essentially purulent, while in the secretion from acute catarrh, where the inflammation is less, the more fully developed mucous globules will predominate, and the secretion will then be muco-purulent in character.

In examining an eye which is affected with purulent conjunctivitis, we observe that there is a general swelling of the conjunctiva, but what most particularly attracts our attention is the increased size of the papillæ, which have assumed the form of small tubercles pressed laterally against each other with considerable force, on account of their turgescence. The color of these tubercles varies from a deep red to that of a reddish blue, though later in the disease, and especially when it passes into a chronic condition, the color is rendered much paler by the thickening of the epithelial layer. This hypertrophy of the papillæ of the conjunctival tissue is limited principally to the palpebral portion. In the cul-de-sac they are so closely pressed together that it is impossible to distinguish the conjunctiva beneath them. Towards the angles of the eye the papillæ have the greatest amount of development. In examining the surfaces of these papillæ, we do not perceive any small injected vessels which would account for their deep red color; and the fact that they bleed on the slightest pressure is entirely due to the papillæ themselves being gorged with blood, rendering it impossible to see the vascular network of the conjunctiva beneath.

In examining these diseased papillæ with a microscope, we find a more or less thickened layer of epithelial cells, the deepest of which

are cylindrical in form, and contain, embedded in a mass of granules, a large oval nucleus. M. Stellwag asserts that the extremities of these cells grow finer and finer the more we advance into the interior of the papillæ, though this has been doubted by others. Beneath this layer of epithelium, which is by no means clearly limited or defined, we find an intercellular mass more or less granular in character, and beneath this again we observe here and there the fibres and fibre-cells of the conjunctival tissue. Through this fibro-cellular mass, with which a quantity of nuclei and cells of new formation is mixed up, a multitude of vessels run and ramify, forming round the base of the papillæ a network of considerable closeness and density. It is this great quantity of cells of new formation and nuclei which determine that the pathological change which has taken place is a hyperplasia of the cellular tissue of the papillæ, and that the swelling of the tissue is not due solely to a serous exudation, but also to a general increase of the elements of the cellular tissue which surrounds the vessels of each papilla. While this increase of the cells of the conjunctival tissue is going on, the same increase takes place also in the intercellular mass. The exact change which takes place in the tissue, when subject to the morbid influences under consideration, is then an alteration in an *anatomical element pre-existing* in the conjunctiva, with hypertrophy of the cellular tissue which forms that element. There is not in this case any *neoplastic* formation, a fact which distinguishes it essentially from a form of conjunctivitis with which it has often been confounded, both in diagnosis and treatment, and which is known as granulations, trachoma, &c., which are not, as this is, a simple hypertrophy of a pre-existing element, but which are, in reality, a new formation, differing essentially in anatomical construction from that of the tissue among which it is found.

As the result, then, of the morbid influence, we have distension of the lid, sometimes so great as to remove all the folds of the skin, caused, firstly, by serous infiltration into the loose and yielding cellular tissue of the subconjunctiva, and, secondly, by a hypertrophy of the cellular tissue of the conjunctiva itself, which is much thickened, ragged, but soft and flabby, and of a deep red color, and prone to bleed at the slightest touch. This is accompanied by an abundant homogeneous discharge.

The complication on the part of the cornea should not, strictly speaking, be considered as a part of the disease, as they are simply the result of it, and are caused by the strangulation (from the pressure of the exudation) of the vessels which nourish this membrane. Such, then, being the anatomical and pathological nature of the disease, we will pass to a consideration of the remedy proposed for its treatment.

One of the most important characteristics of nitrate of silver is its great solubility in water, as we are enabled, by graduating the strength

of the solution, to obtain any effect, from that of the mildest local stimulant to the complete destruction of the part to which it is applied. Water is capable of solving its own weight of the nitrate, so that the prevailing idea, that a solution containing sixty grains to the ounce is a saturated one, is a mistake. Though we are enabled, by varying the strength of the solution, to obtain various effects, still, nitrate of silver in itself is, strictly speaking, a caustic, destroying the tissue to which it is applied by entering into chemical combination with the constituent elements of the tissue, uniting with the albumen and fibrin to form compounds which are exceedingly insoluble. Authors differ very much in regard to exactly what these new albuminous compounds are, many asserting that they have, in fact, no definite chemical composition.

Though there is this difference in regard to the exact composition of the albuminates formed, all admit that such albuminates are formed, and that they are exceedingly insoluble—and it is in a great measure on this insolubility of the albuminate that the action of the drug depends.

The conventional properties attributed to all medicines of this class, of being "stimulant, astringent, and alterative," have also been given to nitrate of silver, though in point of fact it is entitled to none of them. Its action is simply that of an irritant, and the different properties attributed to it are but different degrees of irritation. It certainly does produce contraction of the bloodvessels, though it does so secondarily through the nerves, for in such cases, according to Virchow, the sensitive nerves stand in the same relation to the bloodvessels as to the nerves of muscular motion; and it is by means of this relation that irritating and stimulating agents produce contraction of the bloodvessels.

When applied to the mucous membrane, nitrate of silver combines with the outer layer of the epithelium, forming a white film, which is caused principally by the union of the salt with the albuminous matter of the tissue, though in part, also, by its reaction with the chloride of sodium. The production of this white film by no means implies that an escharotic effect has been obtained, as this will take place even with a solution which is much too dilute to attack the constituent parts of the tissue. That amount of irritation generally known as the "stimulating and alterative effect," is produced by a solution varying in strength from one grain to three of the salt to one ounce of water, while the true escharotic effect is produced by a solution of one to three drachms, or even more, to the ounce of water. A great deal has been said, and justly, of the self-limited action of the nitrate of silver, which is attributed to the fact that when it comes in contact with the tissues it forms an insoluble compound which prevents any excess of the undecomposed salt from penetrating to the tissue below. Now, though this is not always absolutely the case, it is, generally speaking, and the great

danger from the use of the nitrate of silver lies, not so much in its excessive use at any given time as in its frequent repetition. As has been often remarked, one of the principal objections to the use of nitrate of silver is the peculiar discoloration which it gives to the tissue, and which is often a great deformity. But this discoloration is by no means a necessary accompaniment to the use of the medicine. It arises, not from its application, but from the manner in which it is applied. The fault lies not in the agent, but in the administrator. Exactly to what this discoloration is due is not known. Patterson supposed that, a chloride having been formed, this was decomposed by the light, and metallic silver was deposited among the tissues; while, according to Brandes, the metal exists as an oxide, and to Krahmer, in combination with albumen as an albuminate. Mr. Sydney Jones and Fromman have more recently obtained metallic silver in the tissues.

Such being the chemical and physiological action of nitrate of silver when applied to the mucous membrane in a state of health, let us now consider its effect when applied to the same tissue under the morbid condition known as purulent conjunctivitis, or ophthalmia.

The best method of applying nitrate of silver in conjunctivitis is by means of a solid composition consisting of two thirds of the nitrate of potassa and one third of nitrate of silver. By using the nitrate in this form, we are enabled to confine its action to the whole or any part of the palpebral portion of the conjunctiva, and so govern its effect in proportion to the violence of the disease. This is extremely difficult with solutions, which should only be used when the stick cannot be obtained. The lids should be turned out, so that as much of the conjunctiva of the cul-de-sac should be exposed as possible. The lids should then be touched with the crayon, more or less thoroughly, according to the violence of the inflammation, the thickness of the epithelium, and the amount of blood which follows their eversion. Most of the foreign writers recommend that, after the lids have been touched with the nitrate, they should be bathed freely with a camel's-hair brush dipped in a solution of salt and water, in order that the excess of the caustic may be neutralized by the chloride of sodium. The efficiency of this we doubt, as the action of the caustic is a very superficial one, and if, by chance, there was an excess of the salt neutralized in this way, an insoluble compound, chloride of silver, would be formed, which, in the absence of the epithelial layer, might penetrate to the tissue beneath and add materially to the chances of producing that discoloration of tissue which has always been one of the chief objections against the use of this agent.

After a light application in the above manner, we observe that almost immediately a white film, or eschar, is formed, varying in thickness and extent, according to the length of time that we have allowed the nitrate to remain in contact with the tissue. In a short

space of time, proportionate to the degree of inflammation and the vascularity of the part, the eschar begins to be eliminated in bands and flocculi, accompanied by an abundant exudation and an increased flow of tears mixed with globules of mucus. The elimination on the tarsal cartilages, if the conjunctiva is very puffy, will be effected in from fifteen to twenty minutes. In the cul-de-sac it remains attached somewhat longer, perhaps on account of the anatomical construction of the part, but at the end of thirty minutes, or at most an hour, the elimination is complete. During this period the temperature of the eye is considerably elevated, the pain is increased, and the lids, greatly distended, can be opened only with great difficulty, or perhaps not at all. This period, or period of elimination, is followed by a second, in which the epithelial layer, which has been removed with the eschar, is reformed. During this second stage the turgescence of the mucous membrane and the swelling of the lids become less, and the muco-serous and purulent discharge diminishes, accompanied by a corresponding decrease in all the inflammatory symptoms. This diminution in the secretions and abatement in the inflammatory symptoms lasts until the epithelial layer is entirely reformed, when they gradually increase, and the disease would again assume, if left to itself, the same condition which it presented before the application. In order to prevent this, we again apply the nitrate, and the same elimination of the eschar and reformation of new epithelium then takes place, while we observe that the length of time between the elimination of the eschar and the formation of the new epithelial layer becomes greater and greater as we repeat the application, and that the swelling and turgescence of the mucous membrane diminish. The tendency which the disease has to assume its third, or purulent stage, also grows proportionately less till it finishes entirely, and the whole tissue returns gradually to its original healthy condition. The advantages of this method of applying the nitrate of silver over that so much in vogue at one time, and in use even now to a great extent, cannot fail to be apparent—a method which consisted in literally pouring strong solutions of this salt into the eye. If there is, in these cases, an abundant purulent secretion, the solution is in the first place very much weakened by decomposition, and is then almost immediately carried from the eye. But if the solution succeeds in reaching the mucous membrane, this mode of application necessitates its coming in direct contact with that part of the conjunctiva which is but affected in a secondary manner, and which is the most sensitive, on account of the quantity of nerves which it contains, while that part of the membrane which is the principal seat of the disease receives but a very scanty and superficial application. This manner of administration is exceedingly painful, and the eschar which results from it, as it is formed principally on that portion of the conjunctiva which is always the least turgescent and vascular, is consequently

eliminated very slowly and with great difficulty. From this it results that the epithelial layer is often regenerated on the palpebral portion, while the eschar still remains on the conjunctiva of the globe.

Another very serious consequence of its application in this manner, is the elimination of the epithelial layer of the cornea, a complication which interdicts its further use. All of these objections, and others too numerous to mention, are entirely obviated by its use as presented above. If the crayon cannot be obtained solutions may be used, but great care must be taken that the lids should be thoroughly everted, while the patient should be directed to close his eyes, which will bring the cul-de-sac of the two lids in apposition, and prevent the solution from penetrating to the conjunctiva of the globe. The solution should be applied with a camel's-hair brush, and the lids should then be freely washed, as before directed in the case of the crayon, in order to remove what remains of the nitrate undecomposed by contact with the tissue, so that as little as possible of its action should extend to the globe when the lids return to their place.

The most important consideration in the employment of nitrate of silver, and the one most difficult to determine, is the exact time when the application should be renewed. In this respect two errors are generally committed—either the application is made too soon, or it is delayed too long. If it is repeated in too short a time after the elimination of the eschar and before the epithelium has been regenerated, the nitrate then comes in contact with the mucous membrane while denuded of its epithelial layer, and the salt then penetrates the tissues beneath, and there, from the force of its action on the unprotected parts, will either produce cicatrices which will be of lasting detriment to the eye, or, becoming decomposed by coming in contact with the chloride of sodium, which exists in greatly increased quantities among the diseased tissue and secretions, will form an insoluble compound (chloride of silver)—and this being entangled and incorporated amongst the tissue, will leave an indelible stain. If, on the other hand, we allow too much time to elapse between the applications, and so permit the disease to regain its former violence, it is evident that the second application will but produce the same effect as the first, and but little or nothing will be gained.

The exact time, then, to use the nitrate of silver is not *immediately* after the elimination of the eschar, when the membrane is denuded, but when, after a sufficient lapse of time, the epithelial layer has been regenerated completely, but, at the same time, before the swelling of the conjunctiva has re-commenced, and before the amount of the secretions can become as abundant, and the general inflammatory symptoms as severe, as they were before the application. It is only when employed under these conditions that the caustic is capable of producing good effects without running the slightest risk

of injuring the deeper portions of the conjunctival and subconjunctival tissue. In order to determine the moment in which the succeeding applications should be made, it is safer to rely not on the increased swelling of the mucous membrane, which is very difficult to determine, but rather on the increased amount of the secretions and congestion of the eye, which begins to take place just after the epithelium is regenerated, and this is precisely the moment in which the use of the nitrate is indicated. Usually it is sufficient to make but one application in twenty-four hours, but the frequency with which they should be made is in direct relation to the turgescence of the mucous membrane and its vascularity. There are cases in which this is so great that the elimination of the eschar, the re-formation of the epithelium, and the re-instalment of the third stage follow each other so rapidly that the applications must be made twice a day. While on the other hand there are cases where the turgescence and vascularity are so slight that on account of the tardy elimination of the eschar it is only necessary to apply the caustic once in thirty-six or forty-eight hours. I have seen a case of undoubted purulent ophthalmia where the crayon had to be applied but once, the eschar not being entirely eliminated at the end of four days, when the mucous membrane was no longer in a condition to need it.

It will be readily understood that, as the disease abates, the applications will become less and less frequent.

Another most important consideration in regard to the employment of nitrate of silver is, whether it should be used when there is any complication on the part of the cornea. There can be but little doubt that as long as the purulent conjunctivitis exists it would be useless to hope of curing the affection of the cornea, which is but the result, not necessarily a part, of the disease. The best mode of curing the secondary trouble is first to get rid of the primary cause, only great care should be taken that the nitrate should be applied only to the palpebral portions, in order that the eschar may be quickly eliminated; and care also should be taken that all excess of the salt should be removed by repeated washing with the brush dipped in cold water. The slight and temporary friction on the cornea resulting from the eschar is more than coun-terbalanced by the good effects of the nitrate.

Such, then, being the clinical results which follow the application of nitrate of silver to the diseased conjunctiva, it remains to be seen in what manner these results are produced, and how far they can be explained by the chemical and physiological properties of the remedy under consideration.

The application of caustic agents, or even of strong astringents, to the mucous membrane when in a state of active inflammation has long been considered detrimental, though we have high authority for their use. Hunter, under some conditions, strongly advocated this method

of "substitution," and Shakspeare, whose knowledge of "all the ills that flesh is heir to," though intuitive, was as exact as it was varied, not only approved of it, but prescribed it:—

> "Tut, man, one fire burns out another's burning;
> One pain is lessened by another's anguish. . . . .
> Take, then, some new infection to thy eye
> And the rank poison of the old will die."

Still, notwithstanding this high authority, it is only at the very outset of the disease, and when the diagnosis is perfectly certain, that the so-called abortive treatment is now resorted to by skilful practitioners. And as the nitrate of silver, when used in this way, is rather a preventative of the disease than a remedy for it, a consideration of its effect, when so employed, does not come within the purposes for which this article was written. We shall pass, therefore, at once to the consideration of its effect when applied to the diseased mucous membrane.

In inflammation of the conjunctiva, as in all inflammations, there is a great increase in the metamorphosis of the tissue and an increased flow of blood to the part, for the purpose of repairing the waste occasioned by the inflammatory process. By this increased flow of blood new material is rapidly passed, through the capillaries, to the tissues, and is rapidly elaborated to supply what has been consumed by the morbid action. In the very first stages of the disease, when the inflammation is so slight as to amount to little more than light irritation, just enough of new material is elaborated to take the place of what has been consumed, and there is very little if any increase in the normal amount of the secretion; but when the morbid action increases in violence the new material is passed to the tissues in such quantities, and is, under the unnatural stimulus of the disease, elaborated so rapidly, that the cells of new formation and epithelial cells cannot be fully developed, so that, in this unformed condition, they are rapidly eliminated, as pus and mucous globules, in successive layers from the mucous membrane. These, mixing with the other secretions of the eye, form the secretion characteristic of the disease, which is, at the beginning, of a muco-purulent character, but which soon becomes, from the preponderance of pus globules, essentially purulent. By this unnatural determination of the blood to the inflamed spot, and increased rapidity of the circulation, the walls of the capillaries are subjected to an increased and unnatural pressure, which causes them finally (when this becomes disproportionate to their power of resistance) to become distended. As a physical consequence of the dilatation of the vessels there takes place a retarded flow of the blood, which, together with the relaxation and dilatation of the vessels, favors the exudation of the serum into the loose cellular tissue. The consequence of this is, that the lids become enormously distended. It is in this relaxed state of the vessels and œdematous condition of the cellular tissue, accompanied

by a profuse discharge—a state where the acute inflammatory symptoms seem to have passed, with a contemporaneous diminution in the pain which usually accompanies the first stage—that we are most commonly called upon to treat the disease, and it is precisely under these circumstances that the nitrate of silver shows its peculiar merits. When applied to the mucous membrane it forms, with the albuminous products of the secretions and the diseased epithelial layer, a firm, insoluble coagulum, in which are entangled the half-developed cells of new formation, pus and mucous globules, and which adheres with considerable tenacity to the projections of the papillæ beneath. By the irritating effect of the nitrate on the nerves of the part it causes the relaxed vessels to contract, giving tone to their walls, which causes the circulation, which had been retarded, to be once more set in motion, and though the swelling and pain are for a little while increased by the irritating effect of the caustic, both soon subside, and re-absorption begins to take place. By the adherence of the coagulum, the cells of new formation are not eliminated the moment they are formed, and so time is given for their fuller development, and the secretion, which is temporarily stopped by the presence of the coagulum, when this is finally eliminated, is thicker and more mucous in character than it was before the application. It is upon this property of forming a dense and insoluble coagulum that the excellence of nitrate of silver over other irritating astringents depends. Besides the stimulating and astringent effect which it produces upon the vessels of the part, the coagulum which it forms takes the place for a time of the epithelial layer, preventing the escape of the incompletely-formed material, and, when the eschar does finally separate, it takes with it the diseased *débris* of the old epithelial layer, and although this leaves the surface beneath denuded, it leaves it, by freeing it from morbid collections, in a condition much more favorable to the reproduction of a new and more healthy epithelium.

Among the multitude of therapeutical agents which have been proposed as substitutes for the nitrate of silver, the only one which is worthy of special remark is the sulphate of copper in the solid form; for if the other remedies suggested are, on the one hand, free from the defects of the nitrate, they certainly are, on the other, destitute of its virtues. In regard to the salutary effect of the sulphate of copper in certain diseases of the conjunctiva, and its superiority in these diseases over the nitrate of silver, I have not the slightest doubt; and I must say, in justice to its merits, that I have seen some wonderful effects follow its use. But, as these results were obtained by one whose skill in the treatment of diseases of the conjunctiva is justly renowned, I cannot help thinking that the effect produced was rather due to the skill with which the agent was applied than to any inherent virtue of the remedy itself. Besides, the cases to which I refer were mostly of one description, and of that class,

in the treatment of which, as will be seen further on, I admit the superiority of the sulphate of copper over the nitrate of silver, or, indeed, over any other agent.

There seems to be a diversity of opinion among authors in regard to the chemical and physiological action of sulphate of copper on the tissues. Stillé, in his therapeutics, asserts, that when "it is applied to a wound or ulcer it coagulates the albumen by combining with it in the manner of an astringent, but it has no destructive or caustic action." But a little farther on he adds, "when the dose has been very large and fatal, after a considerable interval, ulceration and sloughing of the bowels have been found, and even perforation of the peritoneum." These two statements do not appear to be consistent. The same author, in speaking of the different action of irritants, says, "Mr. Bastick (*Times and Gazette*, April, 1858) has proposed a division of caustics into two classes, and this division appears to be well founded. One class comprises those which merely kill the tissue, as the chloride of zinc, sulphate of copper and zinc, &c.; the other includes those which also decompose the tissue, dead or living, as caustic potassa, nitrate of silver, &c. Agents of the first class also become antiseptics, or preservatives of the tissue, whose vitality they have destroyed, while those of the second form new compounds out of its elements, as potassa does with the fibrin and albumen of the part." If this division is "well founded," how is it possible for the sulphate of copper to belong to any class of caustics when it "has no destructive or caustic action"? And if "it preserves the tissue whose vitality it has destroyed," how is it possible that ulceration and sloughing of the bowels, and even perforation of the peritoneum, have been found?

In opposition to the above opinions, Pereira maintains that its topical action depends on its combination with the constituent elements of the tissue, and that it forms with the albuminous compounds a greenish-white coagulum. Mitschenlich agrees with this opinion. But Lassaigne says that the albuminous compound formed is of a bluish whitish tinge, and results from the union of albumen with the sulphate of copper, while Mulder affirms it is due to its union with the oxide. According to Robin and Verdeil, the true change which takes place is one which is analogous to that which occurs with the nitrate of silver in the presence of albuminous compounds. The salt is decomposed; albuminate of copper on the one hand is formed, and sulphate of albumen on the other, and these two compounds unite to form a third. Now, although as with the nitrate of silver, there is some doubt as to the exact chemical composition of the coagulum formed, there is no doubt that it is formed, and formed at the expense of the albuminous element of the tissue. This coagulum differs very much from that formed by nitrate of silver under similar circumstances in quantity, density and solubility, the sulphate of copper forming with albumen, according to Thomp-

son, a very delicate precipitate which, though insoluble to a degree, is, according to the above-named author and Lieberkuhn, easily soluble in an excess of the salt.

Sulphate of copper in the solid form is a powerful irritant and escharotic, and it is highly probable that, while part of its action is, as above stated, on the constituent elements of the tissue, by far its greatest effect is upon the nerves of the part, acting as all irritants, when used in moderation, do as an astringent, giving tone to the walls of the capillaries and increasing the rapidity of the circulation.

Clinically speaking, when applied to the diseased conjunctiva, instead of producing the dense and firm coagulum characteristic of the nitrate of silver, the adherence and elimination of which are followed by such good results, the effect of the sulphate on the albuminous compounds is so slight as almost to escape detection, and the coagulum really formed is immediately eliminated in minute flocculi, which flow away with the secretions without removing to any extent the morbid collections, and, consequently, without leaving the surface beneath in so favorable a condition, as the nitrate does, for the re-production of the new epithelium.

Thus, though the chemical and physiological action of the nitrate of silver and sulphate of copper, when in the presence of albuminous compounds, is similar in kind, it differs, nevertheless, essentially in degree, and it is upon this difference of degree that the peculiar virtues of each remedy depend, and which prevents their being used indiscriminately, one for the other, with the best effect.

The result, then, of my own observation has been that each of the above remedies has its peculiar virtues, dependent on its peculiar chemical and physiological action, which render them applicable to different diseases, or different degrees of the same disease, and that the nitrate of silver is superior to the sulphate of copper—

(1.) In acute catarrh, in purulent and gonorrhœal conjunctivitis and that of new-born children, when the first violence of the inflammation has passed, when there is much hypertrophy of the papillæ and surrounding tissue, and much swelling of the lids, accompanied by an abundant purulent discharge.

(2.) When an acute attack of purulent or gonorrhœal ophthalmia has passed, leaving behind it a general relaxation, with much hypertrophy of the tissues, and when the epithelial layer is much thickened. The nitrate is useful here as elsewhere in removing the morbid collections and in giving tone to the vessels and tissues, though it should not be repeated often.

(3.) In acute granular conjunctivitis, where the granulations acting, on account of their size, as a foreign body, have occasioned a general conjunctivitis, with hypertrophy of the papillæ, accompanied with swelling of the lids and some discharge. Here it should be discontinued as soon as the acute symptoms have passed.

(4.) In diphtheritic conjunctivitis but *very* rarely, and only when the vascularity of the part has been re-established, when the epithelial layer is unhealthy, and where nature is evidently laboring to throw off the morbid exudations in the tissues.

The sulphate of copper is superior to the nitrate of silver—

(1.) In acute conjunctivitis, where the secretion is scanty and where there is but little hypertrophy of the papillæ and the cellular tissue, and but little alteration of the epithelial layer.

(2.) When acute conjunctivitis becomes chronic—a condition where the nitrate may be occasionally used in combination with it.

(3.) In chronic granular conjunctivitis, especially in trachoma when the mucous membrane seems to be deficient and the epithelial layer thin, and when a tendency to cicatrization of the tissue exists. Here, also, the nitrate may be used occasionally, whenever the epithelial layer is increased in thickness and the granulations appear large and florid.

(4.) In a relaxed condition of the conjunctiva or subconjunctival tissue from whatever cause, where moderate but continued stimulation is required.

Among the varieties of conjunctivitis for the treatment of which both of the above remedies would appear contra-indicated, may be mentioned the following:—

(1.) In simple hyperæmia of the conjunctiva, and in simple catarrhal conjuctivitis, where milder astringents are more advantageous.

(2.) In the latter stages of purulent or gonorrhœal conjunctivitis, when the circulation has been so much interfered with that stasis is liable to occur—a condition in which all astringents are extremely injurious.

As different diseases of the same class must necessarily run into each other, and as no distinct line can be drawn between different phases or degrees of the same disease, no absolute rule for the use of either of the above remedies can be laid down; still, I cannot help thinking that the above classification represents, in a general way, the cases to which the virtues of each remedy are applicable, and that their peculiar therapeutical merits will be found to depend on their respective chemical and physiological properties.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JULY 27, 1865.

The following letter from a distinguished member of our profession, now absent in South America, will most acceptably to our readers replace any disquisition, inevitably labored as it would be in the tropical temperature of the present week, which we could possibly offer them. Its statements with regard to one of the great destroyers of the human race will create some surprise, directly antagonistic as they

are to some current beliefs in this community at the present time. They do not, however, in our judgment, invalidate the deductions from patient and extensive observation here, but only tend to show that in different localities, under widely different social and climatic conditions, the same morbid processes may be set up. We also feel that positive statements, even of intelligent and reliable physicians, as to probable causes of disease, unless based on statistical research and study, with special reference to what in other localities such research has almost demonstrated as the main cause there, should not be allowed the same weight in deciding the general question. The letter was written, as will be seen, on the day of the anniversary meeting of the Massachusetts Medical Society, and by the gentleman, Dr. Cotting, whose address was read to the Society on that day by the Fellow to whom the letter was written.

Dr. R. M. Hodges. { Rio de Janeiro, May 31, 1865. 12—2, P.M. (Boston time).

My Dear Doctor,—In this "far-off land where endless summer reigns," and *rains* often, as now, so copiously that to cross the street one must hire a negro slave to carry him in arms (price one "dump," equivalent to a penny), even here, so far off, the return of *this hour* carries one's thoughts back to his own land, where now, perhaps in sleety breezes, the members of our profession are assembling with a nobler zeal for their calling, and a friendlier interest in each other, than has ever yet been known among their brethren of this warmer clime. If I could send you a toast for the pleasanter portion of to-day's exercises, one that would embody the result of a short experience here, I would give: The continued and lasting prosperity of our medical societies—the dignity of the profession is not more truly sustained by the scientific attainments of individual members than by their frequent meetings for professional and friendly intercourse with one another.—In these regions medical societies are unknown; social gatherings are unheard of. The government looks after the profession—fining irregular practitioners when complained of, and regular ones when riding too fast on *horse-back* to their patients—one may ride at any speed in a vehicle drawn by as many mules as he chooses. Heretofore great jealousy has existed towards foreigners, who, as a rule, have been better educated and superior to native practitioners. This, however, is now passing off, and a better feeling begins to prevail, to the advantage of both parties. Means for professional study have been increased, and local instruction for students is said to be ample and thorough—as much so as in schools elsewhere. Hospitals are sufficiently numerous, and some are not surpassed in any country—for instance, the Don Pedro II. Asylum for the Insane; and the Misericordia, a general hospital, at Rio. The new portions of the latter are remarkable, surpassing any of the kind I have ever seen, in order, neatness, freedom from odors, arrangement and general appearance of the wards. Large, long, high-ceiled rooms, with numerous windows opening to the floor, little iron bedsteads, clean bedding, with bright red blankets nicely folded at the foot of each, perfectly white walls, waxed and polished floors, and doors also, of the beautiful woods of the country, long parallel corridors, court-yard gardens fitted with walks and shaded seats—all give an air of unsurpassed elegance to this home of the

afflicted. Nor will one be disappointed in the details of the establishment, over which Sisters of Charity (all from France, I believe) preside with their accustomed and proverbial devotion.

On inquiring what diseases prevail most, I was surprised to learn that tubercular consumption is by far the most frequent disease, not only at Rio, but throughout the Empire. This has been the unanimous reply of medical men here, and from other parts of the country, both native and foreign. Some rate the proportion of deaths as high as one in four, others one in six or seven, of the whole number from all causes. As to the cause of the disease the answer is, on the one hand comparatively luxurious living and mental anxiety to obtain it, and, on the other, the insufficient supply of animal food and its poor quality; intemperance; and harder work than formerly of the free laborers, &c. &c. The heat of the climate is also considered and emphasized as a principal cause; but on my asking if moisture had not something to do with it, I was answered that, on the contrary, moisture has been diminishing during the thirty years past, while phthisis has been at the same time on the increase. Moreover, the disease has been known to select certain houses or spots remarkable for their healthy position in other respects, removed from water-courses or dampness, in every way unobjectionable, and seize upon every family that dared to occupy such places, through a series of years, until these residences were abandoned and left to ruin through fear of an inevitable attack. Other instances have been known where the disease has occurred in attendants on the sick in such lengthened series as to give rise to a popular belief that it can be communicated from one person to another. Indeed, a prominent physician of Bahia maintains that it is as contagious as smallpox, and brings no small array of facts in support of his argument. What will be said to this by our friends who loudly denounce those who cannot see with their theory-tinted spectacles? Here are facts noted by gentlemen who have no hypotheses to support. They notice that the disease has been on the increase, while the atmosphere has at the same time become more dry; that the worst places have not been in the neighborhood of water, nor such as have been subject to fogs or dampness; while they admit their inability to explain fully its frequency or its increase. Surely such a world-spread disease must have some other origin than one to be indicated by the thermometer or guaged by the drosometer.

While phthisis is so common here, all aver that pneumonia and pleurisy are comparatively unknown—one eminent practitioner saying that in twenty years he had not seen more than four or five cases. Dysentery and diarrhœa are not very frequent. Most practitioners "rely on the calomel practice" in these complaints—other treatment not being so well borne. Elephantiasis and lepra figure largely among skin diseases hereabouts, especially such cases as come to the hospitals, one of which is devoted to their treatment. Hydrocele is also a very common affection. In the streets can be seen at any time numbers of negroes, knock-kneed and otherwise distorted; made so by the great burdens they carry on their heads, and perhaps also by the way they are themselves carried when infants—astride their mothers' backs. I once saw a negro slave carrying a barrel of sugar on his head!

But as I did not come to Brazil to study its diseases, I will not

longer trouble you with such matters. I will merely add a word or two concerning our own party. Since entering the tropics, nearly all have experienced some discomfort or disorder; three or four have been, temporarily, quite ill. One, the conchologist, though convalescent, will return by the first direct opportunity. Another, zoölogist, who has had an attack of varioloid, will leave for Europe, homeward bound, on the first steamer suiting his convenience. Whither, also, may go your humble servant, unless health, which has suffered materially, soon alters for the better. The chief discomforts have arisen from derangements of the digestive organs—an indescribable lassitude, a difficulty of progression which requires the utmost effort of a reluctant will to overcome, a leaden heaviness of the feet, with a confused aching of the head on any continued exertion—and occasionally strong indications of fever. But all these have been mostly overcome by prudence, or have nearly passed off spontaneously. Notwithstanding these partial drawbacks, the country hereabouts has been examined pretty thoroughly, by some or other of us to a distance of nearly two hundred miles into the interior. The flora and fauna are so very different from those of the North, that Prof. Agassiz seems quite overtasked in the multitude of interesting objects presented to his observation; and specimens have been collected thus far sufficient of themselves, one might say, to nearly make up a cargo. He has already made out over twenty new genera and species of fishes—a notable circumstance when it is remembered that his first great work was the classification and description of fishes collected in Brazil by Spix and Von Martius. Many leading citizens, including the Emperor himself, take great interest in the Professor's investigations. By the way, the Emperor is truly a very remarkable man. He is more a student than a ruler; a philosopher rather than a leader. Well posted in science, he questions quite closely those he sends for, on their special subjects, the latest discoveries and discussions—men and things. For instance, he asked the other day about your ether question, the comparative dangers of ether and chloroform, and also the operation of tracheotomy. He often sends for Prof. Agassiz, and offers him varied and valuable assistance in furtherance of his journey and the great object he has at heart.

But I must stop, or else you will have reason for wishing that I had remained at home to save you from reading my long-spun letter.

Kind remembrances to our professional and other friends.

Yours faithfully, B. E. Cotting.

Plural Births.—*The Medical and Surgical Reporter* publishes a case of plural births, occurring in the practice of Dr. H. H. Lowrie, of Washington, D. C. The mother, aged 36 years, has had four previous children in single births, unattended by any unusual circumstances. At the time of the present labor she was enormously enlarged, the whole lower part of the body and the lower extremities being of more than twice their natural proportions. She measured "around the abdomen, on a level with the umbilicus, 84 inches; around the knee, 28 inches; around the calf, 27 inches; and around the foot, directly over the junction of the phalanges and metatarsal bones, 20 inches. The skin was shiny from tension, and so rigid that it did not dent *at*

all upon pressure." She was delivered of four female children, three of which lived from one to fifteen minutes; the last was stillborn. The amount of liquor amnii was enormous; in the words of the reporter, it "gushed out with the force of water from a pump, and continued to rush with almost unabated force the whole time of the discharge. I caught *six gallons* of the waters, but much more was discharged, as the bed, coverlids and floor were completely saturated. There was no difference in the color and character of the waters from those passed generally in natural labor." It is stated that there were but two placentæ, from one of which one cord arose, from the other three. From the size of the children, Dr. Lowrie estimated the age of the fœtuses to be about six and a half months. The size of the woman ten days after delivery was "58 inches around the abdomen; 18 inches around the knee, calf, and foot respectively, the last being measured at the same point from which measurement was given above." At the time the case was reported she was doing well, although there had been much uterine hæmorrhage.

Harvard Medical School.—The following is a list of the gentlemen who received their medical degrees on the 19th inst., with the subjects of their dissertations:—

Name and Residence.	*Thesis.*
Clarence John Blake, *Boston*,	Disinfectants.
Franklin Whitney Brigham, *Shrewsbury*,	Mind and Body.
Joseph A. Bubien, *U. S. Navy*,	Bilious Remittent Fever of the West Coast of Mexico.
John Thomas Cameron, *Prince Edward's Isl'd*,	Periodic Fever.
Richard J. P. Goodwin, *Boston*,	Gun-shot Wounds.
Alfred Leonard Haskins, A.B., *Boston*,	Anatomy and Physiology of the Liver.
Charles Edward Inches, A.B., *Boston*,	Cystitis.
Amos Howe Johnson, A.B., *Middleton*,	Scrofula.
Otis Henry Johnson, A.B., *Haverhill*,	Scurvy.
Vincent Elijah Keegan, *Roxbury*,	Dietetics.
John Ban McDonald, *Belfast, P. E. I.*,	Quinine.
George Edward Mason, *Providence, R. I.*,	Causes and Treatment of Ununited Fractures.
Horace George Miller, *Pawtucket, R. I.*,	Hypermetropia.
Simon Groves Miromian, *Lowell*,	Diphtheria.
Charles Henry Page, *U. S. Navy*,	Dengue.
Isaac Newton Perley, *Enfield*,	Variola.
Charles Burnham Porter, A.B., *Boston*,	Compound Fracture of the Femur.
George Herman Powers, A.B., *Boston*,	Mechanism of Expiration.
Daniel Livingston Randall, *Easton*,	Scarlatina.
Charles Edward Sanborn, *Winchester*,	Hospital Gangrene.
Edward Sawyer, *Boston*,	Province of the Art of Healing.
George Grosvenor Tarbell, A.B., *Lincoln*,	Camp Diseases.
Oliver Fairfield Wadsworth, A.B., *Boston*,	Paraplegia.
Samuel Gilbert Webber, A.B., *West Needham*,	Dengue.
Edward Wigglesworth, Jr., A.B., *Boston*,	Classification of Venereal Disease.
William Woods, *Boston*,	Typhoid Fever.

George Cheyne Shattuck, M.D.,
Dean of the Medical Faculty.

July 21st, 1865.

The thirteenth annual meeting of the American Pharmaceutical Association will be held in Boston, on Tuesday, Sept. 5, at 3 o'clock, P.M.

The British Pharmaceutical Conference will meet in September, in the city of Birmingham. The *Pharmaceutical Journal* for June con-

tains a list of the subjects of inquiries which are expected to be answered on that occasion, about fifty in number.

Governor Curtin has appointed Brigadier General Horatio G. Sickel, who has faithfully served in the Army during the past four years, to the position of Health Officer in Philadelphia.

The British Association for the Advancement of Science will hold its sessions this year at Birmingham, under the Presidency of Professor Phillips.

The physicians of St. Mary's County, Maryland, met at Leonardtown, on the 9th of May last, and formed a Society, under the title of the "Medico-Chirurgical Society of St. Mary's County."

The following-named medical officers have been announced as Quarantine Officers for the several ports set opposite their respective names:—Assistant Surgeon E. K. Hogan, United States Volunteers, Tybee Roads, Ga. Assistant Surgeon Alexander Lelong, United States Volunteers, Fernandina, Fla. Assistant Surgeon E. D. Buckman, United States Volunteers, Charleston, S. C. Assistant Surgeon Walter R. Way, United States Volunteers, Port Royal Harbor, S. C.

The Miami Medical College, at Cincinnati, has recently been reorganized, and preparations are being made by which a most thorough course of medical instruction will be given. A large and very strong corps of professors has been elected to fill the various chairs.

The Annual Announcement of the St. Louis Medical College is before the public. This is a first class institution, its chairs filled by men of experience and eminent as teachers. All the usual facilities are abundant here.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, JULY 22D, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	51	63	114
Ave. mortality of corresponding weeks for ten years, 1853—1863,	42.5	39.0	81.5
Average corrected to increased population - - - - -	00	00	90.21
Death of persons above 90 - - - - - - - -	0	1	1

PAMPHLETS RECEIVED.—Medical Communications, with the Proceedings of the Seventy-third Annual Convention of the Connecticut Medical Society, held at Hartford, May 24th and 25th, 1865.

MARRIED,—At Chelmsford, June 29th, Charles Dutton, M.D., of the Illinois State Hospital, to Miss Mary E. Perham, of Chelmsford.

DIED,—At Washington, D. C., on the 5th inst., Dr. Bela N. Stevens, of New Hampshire, First Assistant Physician at the Government Insane Asylum, Washington, D. C.

DEATHS IN BOSTON for the week ending Saturday noon, July 22d, 114. Males, 51—Females, 63. Accident, 1—apoplexy, 4—congestion of the brain, 1—disease of the brain, 5—inflammation of the brain, 4—bronchitis, 3—cancer, 2—carbuncle, 1—cholera infantum, 17—cholera morbus, 1—consumption, 13—convulsions, 3—croup, 1—diarrhœa, 2—diphtheria, 1—dropsy, 2—dropsy of the brain, 6—drowned, 1—dysentery, 9—scarlet fever, 1—typhoid fever, 5—hæmorrhage, 2—disease of the heart, 2—infantile disease, 3—intemperance, 2—disease of the kidneys, 2—congestion of the lungs, 1—inflammation of the lungs, 1—marasmus, 1—measles, 1—old age, 1—paralysis, 3—peritonitis, 1—puerperal disease, 1—scrofula, 1—smallpox, 1—unknown, 6—whooping cough, 2.

Under 5 years of age, 57—between 5 and 20 years, 10—between 20 and 40 years, 20—between 40 and 60 years, 14—above 60 years, 13. Born in the United States, 85—Ireland, 21—other places, 8.

TWENTY-SIX WEEKLY NUMBERS—AUGUST, 1865, TO FEBRUARY, 1866.

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INDEX TO THE SEVENTY-THIRD VOLUME.

Abbot, Dr. S. L. Effectual palliative for prolapsus recti, 102; on the use of bromide of potassium in epilepsy, 103; two cases of sudden death following anomalous nervous symptoms, 89
Accomodation, lesion of, after excessive fatigue and exposure, 220
Activity of the respiration, 108
Adipocere, specimen exhibited to the New York Pathological Society, 27
Air, injection of, into abscesses, 347
Albany City Hospital, cases in, 392
Alexander, Dr. C. Case of imperforate hymen, 257
Amblyopia and amaurosis, 349, 372, 394, 413, 433, 455, 472
American Association for the Promotion of Social Science, its organization, officers, &c., 221
American Medical Association, 28; transactions of the, 127
American Pharmaceutical Association, meeting of, with abstract of proceedings, 141
Amputations, statistics of, in "Confederate States army," 445; partial of foot, five cases of, 189
Anencephalous fœtuses, 356
Aneurism of brachial artery, operation, 381; of sciatic artery, cured by injections of *perchlorure de fer*, 127
Antagonism of atropia and morphia, 118
Aphasia, discussion on, 187
Appointment of Chief of Bureau of Medicine and Surgery in the Navy, 48; in Berkshire Medical College, 168; of Prof. T. H. Huxley, at the Royal Institution, 107
Army Medical Board, meeting of the, 127
Army, surgical reports of, 467
Artery, lingual, two cases of ligature of, 214
Atropia and morphia, antagonism of, 118

Baltimore College of Dental Surgery, 48
Barnes, Surgeon General, brevet promotion of, 88
Benevolent Society, Mass., annual meeting, 307
Berkshire Medical College, commencement, 326
Berthelot, M., appointed Professor of Chemistry, 348
Bethune, Dr. George A. Lesion of accommodation after excessive fatigue and exposure, 220
Bibliographical notices, 278, 337, 519
Bifid uterus and double vagina, 262
Bigelow, Dr. H. J. Death from hemorrhage three weeks after confinement, 422
Bisulphite of soda as a remedy in measles and spotted fever, 243
Bladder, cow's, singular tumor in, 217
Blake, Dr. John H. Cases in country practice, 469
Blood, germinal matter of, 406
Books received, 187, 228, 268
Borland, Dr. J. N. Case of pyelitis, 423
Boston Dispensary, 287
Boston City Hospital, surgical cases at, 149, 189, 214, 229, 249, 329
Boston Society for Medical Improvement, 101, 218, 258, 359, 380, 422
Bougie, gutta percha, pieces of removed from the urethra, 260
Bowditch, Dr. H. I. Hydrothorax, paracentesis, 363
Braman, Dr. I. G. Accidental phymosis, 304
Breed, Dr. B. B., brevet promotion of, 108
Brown, Dr. Ira D. Cases in Albany City Hospital, 392; on hypophosphites, 409
Brown Séquard, Prof. C. E., illness of, 208
Buckingham, Dr. Charles E., appointment of in the Medical School of Harvard University, 247
Burnham, Dr. Walter. Cases of ovariotomy, 209; successful removal of hypertrophied uterus, 209
Butler, Dr. L. C. Singular tumor in cow's bladder, 217

Calculus passed per urethram, 258

Calhoun, J. T., surgeon U. S. A., brevet promotion of, 68
Cairo, Ill., new medical school at, 220
Canada, medical societies in, 368
Carpus, compound dislocation of the semilunar bone of the, 261
Cases in country practice, 469
Cataract, extraction of, 369; of eighty-three years standing, successfully removed in a patient ninety-three years old, 94
Cattle plague, treatment by sulphites, 447
Cavity in parietal bone containing an encysted tumor, 260
Cerebro-spinal meningitis, 356; in Post Hospital, Boston harbor, cases of, 109
Cervex uteri, division of for various uterine complaints, 121
Charrière, Jr., death of, 348
Charities of Massachusetts, statistics of, 485
Cheever, Dr. David W. Party-colored hair, 220; surgical cases by, 149, 189, 214, 229, 249
Childs, Prof. Timothy, decease of, 168
Chinese customs during menstruation, 327
Chittenden County Medical Society, 506; annual meeting of, 246
Chloroform, its action and administration, 519; means of averting death by, 267
Cholera, its devastations in the East, precautionary measures in Massachusetts, 183; the Boston City Government, 244, 266; City Physician's Report on, 244; epizoötiæ precursors of, 247; action of Suffolk District Society, 364, 392; on board the Atlanta, 516; in Egypt, 67; its management, 489; and quarantine, 324, 382; the present epidemic of, 346, 403, 425, 432, 444, 449, 477, 484
City, the sanitary inspection of, 462
Civiale's clinics, 498
Clinical cases in Albany City Hospital, 392
Collins, Dr. G. L. Ovarian tumor, 86; case of glass pessary in vagina fifteen years, 201; absence of vagina, 201; fibrous tumor removed from the breast of a young girl, 201; rupture of stomach, 202; exostosis of odontoid articulation, 202; large foreign bodies swallowed, 240
Commencement at Berkshire Medical College, 326; at Long Island College Hospital Medical School, 48; at the New Hampshire Medical Institution, 366
Communications received, 88, 128, 168, 187, 228, 268
Comstock, Dr. Joseph. On spotted fever in Rhode Island in 1810-14, 237
"Confederate States" army, surgical statistics, 445
Conjunctiva, dermoid tumor of, 389
Connecticut, Valley Dental Association, 308; State Medical Society, communications to, for 1865, 125
Coryza, instantaneous cure of, 507; treatment of, 367
Cork and its uses, 34
Cotting, Dr. B. E. Annual address before the Massachusetts Medical Society, 163; notice of, 333; management of cholera, 489
Curative treatment of phthisis, 65
Cut-throat, three cases of, 229

Death of Dr. Felix Robertson, 27; of Sir John Richardson, 68; of Sir William Hooker, 107; of Prof. Timothy Childs, 168; of Dr. Simeon Snow, 228; of Prof. Chandler R. Gilman, 228; of Dr. John Green, 265
Death, two cases of, following anomalous nervous symptoms, 89; by hanging, 404
Deaths, in Boston, 28, and weekly; of physicians, 68, 108, 128, 187, 228, 268; by lightning in France, 108
Dental Society, Massachusetts, address of Dr. N. C. Keep, 284
Dental Surgery, Baltimore College of, 48
Derby, Dr. George, surgeon U. S. V., brevet promotion of, 88
Derby, Dr. Hasket. Enucleation of eye, 302; report of annual meeting of the Ophthalmological Society at Heidelberg, 203; translation, 349, 372, 394, 413, 433, 455, 472
Dermoid tumor of conjunctiva, 389
Dictionary of Medical Sciences, 337
Diphtheria, cases of, 104
Disease a part of the plan of creation—Dr. Cotton's annual address before the Massachusetts Medical Society, 163
Dispensary, Boston statistics, 287
Dysentery, new remedy for, 95
Dysmenorrhœa, metrorrhagia, ovaritis and sterility, treatment by division, 121
Earle, Dr. Pliny. Report on typhoid epidemic, 129, 155, 169, 247

Egypt, cholera in, 67
Electrical phenomena, singular, following lightning stroke in the human body, 227
Electricity in the treatment of disease, 498
Elephantiasis of scrotum, 429
Ellis, Dr. Calvin. Introductory address at Medical College, 389
Endoscopy, 442
Enucleation of the eye, bony deposits in choroid, 302
Epilepsy, bromide of potass in, 103

Epizoötiæ precursors of cholera, 247
Errors in diagnosis, 234
European schools of medicine, 345
Exostosis of odontoid articulation, 202
Expectant medicine, prize, 286
Extract of meat, 344
Extraction of hard cataract, 369
Extravasation of urine, four cases of, with perineal section, 249
Eye, enucleation of, 302

Fee of M. Nélaton, from the Czarowitch, 127
Feeble-minded Youth, School for, annual meeting of, 227
Female Hospital, its relations with the Massachusetts Medical Society, 481, 504, 527
Female practitioners, 481, 504, 527
Fistula in ano, operation, 496
Fistula, vesico-vaginal, cases of, 329
Food, the preservation of, 38
Ford, Dr. C. L. Report on epidemic of typhoid fever, 129, 155, 169, 247
Foreign medical intelligence, 107, 504
Foreign bodies, large, swallowed, 240
France, suicide in, 447

Gazette Médicale de Montreal, 65
Gilman, Prof. Chandler R., death of, 228; resolutions on, 264
Glandular proliferous cysts of the breast, 259
Gould, Dr. A. A. Case of sudden death, 423
Graeffe, Prof. A. Von, on amblyopia and amaurosis, 349, 372, 394, 413, 433, 455, 472
Gray, Dr. F. H. Mortification of nates, 362
Greene, Dr. James S. Case of cerebro-spinal meningitis, 356
Green, Dr. John, action of Worcester District Medical Society on the death of, 265
Green, Dr. S. A., appointed superintendent of Boston Dispensary, 306

Hæmatoma, pelvic, 360
Handbook of Practice for 1865, 284
Hanging, death by, 404
Harvard University, introductory address on the relations of health and disease, 289, 305
Hay, Dr. Gustavus. Extraction of cataract, 369
Health and mortality of New York, 66
Heard, Dr. J. Theodore, surgeon U.S.V., brevet promotion of, 128
Hemorrhage three weeks after confinement, death, 422
Hernia cerebri, case of, 200
Hernia, cases of in country practice, 469; femoral, strangulation, death, 362; strangulated, recovery, 363
Hodges, Dr. R. M. A case of glandular proliferous cysts of the breast, 259; salivary calculi, 260; pieces of gutta percha bougie removed from the urethra, 260; a cavity in the parietal bone containing an encysted tumor, 260; compound dislocation of the semilunar bone of the carpus, 261; a bifid uterus and double vagina, 262; amputation of thigh in a boy of 13—death, osteo-myelitis—necrosis, 218; cases of removal of tarsal bones, 380, 381; operation for aneurism of brachial artery, 381
Homans, Dr. C. D. Case of calculus passed per urethram, 258
Hospital, Blockley, statistics of, 48; Massachusetts General, election of House Officers, 508
Hospitals, ventilation of, 506
Hours of labor, circular of State Commissioners, 262
Humerus, resection of, 198
Huntington, Dr. Elisha, death of, 465
Hydro-nephrosis, 104
Hydrothorax, with pneumonia, 363
Hypodermic injections, 343
Hypophosphites, their therapeutic value, 409

Imperforate hymen, case of, 257
Indians of Washington Territory, 429
Infantile syphilis, 67
Injection of air into abscesses, 347
Injury to odontoid articulation produced by exostosis, 202
Inoculation of rabbits with tuberculous matter, 493
Insane, hospital for the hopelessly, 448; New Hampshire Asylum for the, statistics of, 88
Intelligence, foreign medical, 48, 107, 504
Interments of deceased soldiers at Nashville, 168
Intermittent fever, discovery of its cause, 524
Introductory at Massachusetts Medical College, 305
Ives prize questions, 28

Jackson, Prof. J. B. S. Case of femoral hernia, 362; of monstrosity, 101; of hydro-nephrosis, 104; anencephalous fœtuses, 359
Jefferson Medical College, election of professor in, 48
Jeffries, Dr. B. Joy. Report on ophthalmia by, 56
Journals, medical, new, 408

Keep, Dr. N. C. Address before the Massachusetts Dental Society, 284
Kramer's Aural Surgery, 9

Labor, hours of, circular of State Commissioners, 262
Laryngoscope in diseases of throat, 283
Laryngoscopy in tumors of laryngeal nerve, 510
Lectureships, new, in the University of Pennsylvania, 147
Liebrich, Dr., correction concerning, 484
Lightning, deaths by, in France, 108
Luxation, partial, of radius, 63

Mack, Dr. D., Jr. Elephantiasis of scrotum, 429
Malignant disease of bladder, 220
March, Prof. Alden. Errors of diagnosis, 234
Marriages of physicians, 28, 148, 187, 228, 248, 268
Massachusetts College of Pharmacy, resolutions on Sunday closing, 306
Massachusetts, General Hospital, election of house pupils, 508; Medical Benevolent Society, annual meeting of, 307; State charities, 485; Dental Society, address by Dr. N. C. Keep, 284
Medical Association, American, 28; transactions of the, 127
Meat, Borden's extract of, 344
Medical Journal, new, in Montreal, 65
Medication in disease, necessity of, 269
Meningitis, cerebro-spinal, 356
Menstruation among the Chinese, 327
Minot, Dr. Francis. Nausea and vomiting of pregnancy, 49
Miscarriage, placenta prævia, 63
Modern plague of serpents, 503
Monroe, Dr. F. Le Barron. Bisulphite of soda as a remedy in measles and spotted fever, 253
Monstrosity, case of, 101
Morphia and atropia, antagonistic, 118
Mortification of nates, 362
Mott, Dr. Valentine, estate of, 48

Nashville, interments of deceased soldiers at, 168
Nates, mortification of, 362
Nearsightedness a disease, 69
Necessity of medication in disease, 269
Nélaton's fee from the Czarowitch, 127
New Hampshire Asylum for the Insane, statistics of, 88; Medical Institution, 366
New Orleans School of Medicine, 327
New York, health and mortality of, 66
Nitrous oxide, researches on, by G. J. Zeigler, M.D., 281; is it a safe anæsthetic? 116
Notices, bibliographical, 278, 337, 519

Ohio Northern Lunatic Asylum, 268
Oidium, another indictment of, fatal to human beings, 188
Oliver, Dr. H. K. Laryngoscopy in tumors of laryngeal nerve, 510
Ophthalmological Society, third annual meeting of at Heidelberg, 203
Ophthalmology, report on progress of in 1864, 56
Ovarian tumor, 62, 86
Ovariotomy, 63; four cases of, performed by Walter Burnham, M.D., 209; statistics of Dr. Keith's operations, 227; in France, 401
Ozone, 446

Page, Dr. Calvin G. Cases of cerebro-spinal meningitis, 100
Pamphlets received, 28, 88, 148, 168
Palmer, Dr. A. B. Report on typhoid epidemic, 129, 155, 169, 247
Parietal bone, cavity in, containing an encysted tumor, 260
Paris, English Hospital in, 391
Parks, Dr. Luther. Cases of uterine disease, 29; on a case of double pneumonia, with recovery, 103
Party-colored hair, 220
Pelvic hæmatoma, 360
Pennsylvania, University of, auxiliary faculty, 407
Pension-examining surgeons appointed, 268
Perchloride of iron in cancerous affections, 484
Perchlorure de fer, injections of, for aneurism of sciatic artery, 127
Pessary, glass, in vagina fifteen years, 201
Petroleum, production of in the United States, 128
Pharaoh's serpents, 503
Pharmaceutical Association, American, 108, 141
Pharmacy, Massachusetts College of, 306
Phthisis, curative treatment of, 65; prize essay on prophylaxis against, 28
Phymosis, accidental, with hydrocele, 304
Physician's Prescription Book (Pareira's) notice of, 344
Placenta prævia, 63
Plagiarism, 25, 66
Pneumonia, double, recovery, 103
Poisonous effects of a wasp's sting, 243
Politzer's illuminated membrana tympani, 9
Pomeroy, Dr. O. D. Successful closure of wound of sclerotic by sutures, 216
Pregnancy, nausea aad vomiting of, 49
Preservation of food, 38
Pritchard, Dr., trial of for poisoning his wife and mother-in-law, 42
Prize essay on Prophylaxis as it relates to Phthisis Pulmonalis, 28
Prize, for essay on Medical and Vital Statistics, 268; for dissertation on Expectant Medicine, 286
Prize questions, by the Ives Prize Committee, 28
Prolapsus recti, effectual palliative for, 102

Providence Medical Association, 62, 200, 240; proceedings of, 440
Psoriasis, 309
Puerperal convulsions, 440
Pyelitis, 423

Quarantine and cholera, 324, 382
Question which should be settled, 481

Radius, partial luxation of, 63
Railroad accidents in Massachusetts, 308
Rain, an inch of, 87
Rectum, its Diseases, T. J. Ashton's work on, 523
Relations of Health and Disease, an address, 289
Renewal of life, Dr. Chambers's lectures on, 339
Report on an epidemic of typhoid fever at Maplewood Young Ladies' Institute, in 1864, 129, 155, 169, 247
Report of Committee on the "Progress of Ophthalmology in the year 1864," to the American Ophthalmological Society, 56
Resection of humerus, case of, 198
Resignation of Mr. Lawrence and Prof. Malgaigne, 107
Respiration, activity of the, 108
Review of Dr. Kramer's Aural Surgery and Aural Surgeons in England and Germany, 9; of Dr. Politzer's work on the Illuminated Membrana Tympani, 9
Reynolds, Dr. Wm. B. Case of resection of humerus, 198
Richardson, Sir John, death of, 68
Richmond Medical Journal, 327
Robertson, Dr. Felix, of Nashville, Tenn. death of, 27
Rice, Dr. David. Necessity of medication in disease, 269; can typhoid fever be broken up? 494
Rupture, of abdominal parietes and birth, 328; of stomach, by a fall, 202
Russian plague, action of city government with regard to quarantine, 63

Salivary calculi, 260
Sanitary inspection of the city, 462
Scabies, recent researches on, 72
Scarlatina among swine, 108
Science, social, 106
Sclerotic, wound of, successfully closed by sutures, 216
Scrotum, elephantiasis of, 429
Selected papers, 20, 34, 38, 56, 72, 95, 118, 121
Semilunar bone of carpus, compound dislocation of the, 261
Sewers and their evils, 322; ventilation of, 507
Sinclair, Dr. A. S. Case of pelvic hæmatoma, 360
Skin, Student's Book of Diseases of (Wilson's), notice of, 278
Smallpox produced by cow vaccine, 168
Snow, Dr. Simeon, death of, 228
Social Science, 106; American Association for the Promotion of, 221
Spotted fever in Rhode Island in 1810–14, 237
Sprague, Dr. F. P. Dermoid tumor of conjunctiva, 389
St. Louis, clinical facilities in, 407
Stomach, the Diseases of, work by Wm. Brinton, M.D., 283
Storer, Dr. Horatio R., appointed Professor of Obstetrics in Berkshire Medical College, 168
Stricture, annular, of intestine, 441
Subcutaneous injections, danger of, 347
Suicides in France, 447
Sulphites in cattle plague, 447
Surgery, conservative of upper extremity, five cases of, 149; the Principles of, work by James Syme, F.R.S.E., 522
Surgical cases from the records of the City Hospital, Boston—first paper, five cases of conservative surgery of the upper extremity, 149; second paper, five cases of partial amputation of the foot, 189; third paper, two cases of ligature of the lingual artery, 214; fourth paper, three cases of cut throat, 229; fifth paper, four cases of extravasation of urine and perineal section, 249; sixth paper, two cases of vesico-vaginal fistula, two cases of thyroid tumor, 320
Swine, scarlatina among, 108
Syphilis, infantile, 67
Syphilization, Prof. Bœck on, 20

Tarsal bones, removal of, 380, 381
Temperance, use of alcohol in the preparation of medicines, 87
Tennessee Hospital for Insane, 328
Thigh, amputation of, in a boy of thirteen years, tetanus, death, 218
Thompson, Dr. A. W. Fistula in ano, 496
Thyroid tumor, cases of, 331
Tibia, injury to, 442
Townsend, Dr. William E. Cases of diphtheria, 104
Traver, Dr. H. H. Case of hernia cerebri, 200
Trial of Dr. Pritchard in Edinburgh, for the murder of his wife and mother-in-law: scientific evidence in the case, 42
Tuberculous matter, rabbits inoculated with, 483
Tumor, fibrous, weighing half a pound, removed from the breast of a girl of fourteen, 201; ovarian, 62
Typhoid fever, report on an epidemic of, at Maplewood Young Ladies' Institute, 129, 155, 169, 247
Typhoid fever, can it be broken up? 494

United States Army Surgical Reports, 467
Urine, extravasation of, 249

Uterus, bifid and double vagina, 262; hypertrophied, successfully removed, 209; successful removal of, 400
Uterine disease, cases of, 29

Vaccination in Great Britain, 288
Vaccine matter from the cow, producing smallpox, 168
Vagina, double, and bifid uterus, 262; absence of, 201
Variola and vaccinia, relations of; recent reports to the French Academy of Medicine, 84
Ventilation of hospitals, 506; of sewers, 507
Vermont Medical Society, 286
Vesico-vaginal fistula, cases of, 329
Vital statistics for the week, 28, and weekly

Wakefulness, Dr. W. A. Hammond's work on, 521
Walsh, Dr. P. D. Contagiousness of cholera, 432
Wasp sting, poisonous effects from, 243
Wheeler, Dr. W. G. Malignant disease of bladder, 220; case of hernia, 363
White, Dr. James C. On psoriasis, 309
Wilder, Dr. A. M., Surgeon U. S. V., brevet promotion of, 108
Williams, Dr. Henry W. Nearsightedness a disease, 69; successful removal of cataract of eighty-three years standing, from a patient ninety-three years old, 94

Zeigler, Dr. George J., note from, 66

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KRAMER AND POLITZER ON AURAL SURGERY.—A REVIEW.*

[Communicated for the Boston Medical and Surgical Journal.]

THESE volumes, the consideration of which we intend to make the basis of the following article, are as widely different in character as it is possible to imagine two works on the same general subject to be; yet, for the sake of convenience, and perhaps also of comparative criticism, they are best noticed together. From the time of the first appearance of Dr. Kramer's writings in America, in 1838, down to the publication of his "Aural Surgery of the Present Day," they have generally, if not universally, received laudatory notices from our medical reviewers. We are constrained to believe that indiscriminate praise has been awarded his labors, because they were the only works, with any scientific basis, on the subject to which they pertained. With the new era in aural surgery, even the seeming necessity for this blindness to faults in theory and practice has passed away, and our criticisms, if more severe, become more just. Our readers may remember a little pamphlet entitled "A Vindication of the Present State of Aural Surgery," being an answer to Dr. Kramer's last work, which was fully noticed in our pages. The present brochure is probably intended as a rejoinder to that pamphlet. The author is very severe upon the other aural surgeons of England and Germany, taking issue with them upon almost all points, and by implication a claim for Dr. Kramer is presented as being the only known surgeon who practises and teaches the proper treatment for affections of the ear. The brochure opens with a table of 600 ear cases, 300 of which were observed in England, and 300 in

* Ohrenheilkunde und Ohrenärzte in England und Deutschland. Ein Nachtrag zur Ohrenheilkunde der Gegenwart. Von Dr. W. KRAMER. Berlin. 1865. Pp. 96.

Aural Surgery and Aural Surgeons in England and Germany. A Supplement to "The Aural Surgery of the Present Day." By Dr. W. KRAMER.

Die Beleuchtungsbilder des Trommelfells im gesunden und kranken Zustande. Klinische Beiträge zur Erkentniss und Behandlung der Ohrenkrankheiten. Von Dr. ADAM POLITZER. Docent der Ohrenheilkunde an der Wiener Universität, &c. Mit 24 Chromolithog Trommelfellbildern. Wien. 1865. Pp. 143.

The Illuminated Membrana Tympani, in a Normal and Morbid Condition. A Clinical Contribution to the Diagnosis and Treatment of Diseases of the Ear. With 24 Chromolithographic Representations of the Membrana Tympani. By Dr. POLITZER, &c.

Germany. We present this herewith in order that the nomenclature may be compared with that of three other modern authors—Toynbee, Tröltsch and Schwartze.*

300 *Cases of Diseases of the Ear observed in England, compared with the same number seen in Germany.*

	In England.	Germany.
EXTERNAL EAR.		
Catarrh of the Ceruminous Glands	9	46
Inflammation of the Cartilage	4	8
Inflammation of the Cellular Tissue	1	1
Inflammation of the Periosteum	0	0
Acute Inflammation of the Membrana Tympani	1	2
Chronic Inflammation of the Membrana Tympani	28	55
MIDDLE EAR.		
Catarrhal Inflammation without exudation	0	2
Catarrhal Inflammation with free exudation	7	10
Catarrhal Inflammation with free and submucous exudation	9	29
Catarrhal Inflammation with submucous exudation	239	143
Nervous Deafness	2	4
	300	300

No account of the results of treatment is given, a point upon which much stress is laid in America, and one that is doubly interesting in any table of cases from Dr. Kramer, since by a totally different mode of treatment from that at the present day recommended by him he formerly cured quite a satisfactory percentage of cases. He then considered a very large proportion of his cases as nervous affections, and had a very warm discussion with Mr. Wilde on this point. He explains his inconsistency, however, by stating that he is now able, by means of his five catheters and his flexible bougies, to recognize changes in the cavity of the tympanum which he was formerly with his means of diagnosis unable to appreciate.

It will be observed, by reference to the table, that affections of the middle ear came much more frequently under observation in England than in Germany. (It may be necessary to state that Dr. Kramer, for the past few years, has spent each summer in the practice of his profession in London, returning in the winter to Berlin.) This disproportion Dr. Kramer thinks is not to be explained by the difference of English climate and dietetics from those of Germany. He is inclined to ascribe it rather to the habits of the English in regard to ablution and access of fresh air. He particularizes as follows—the habit of plunging the head into a basin of the coolest water, purposely filling the ears, &c. He also says it is a custom in England to sleep in rooms where the windows are left open for some inches at all seasons of the year. Dr. Kramer remarks (quoting his own naïve language verbatim), "I remember to have seen, in very good houses in England, bedrooms in which the curtains before the chimney (?) were kept in constant motion day and night by the wind."

A detailed account is then given of nineteen experiments made by him, assisted by Prof. Recklinghausen, on the dead body and on a

* New York Medical Journal, June, 1865, page 235.

glass apparatus, made to resemble the cavity of the tympanum with the Eustachian tube. No notice is given of similar experiments made by a committee appointed by the Berlin Medical Society, of which committee Virchow was chairman, whose report was, we believe, published before Dr. Kramer's.* Some of the conclusions which Dr. Kramer claims follow from his experiments, are herewith presented:—"*Elastic bougies may be easily passed into the cavity of the tympanum through the catheter inserted into the Eustachian tube.*" This is certainly well enough demonstrated by the two experiments on the dead body, here given, but so far as we know the position that they *can* be introduced has been unassailed. The more important questions are, of what therapeutical value are they, and when indicated? Is there any danger in their use? We have lately heard it claimed that their use is as indispensable in treating affections of the tube and middle ear as Bowman's probe in lachrymal obstruction. The discriminate, careful use of bougies in certain rare cases of stricture of the Eustachian tube, is undoubtedly of value, as cases of Dr. Schwartze testify,† but Dr. Kramer's works do not give us much proof of their value, his testimony being much more clear as to the skill which he possesses in introducing them and as to the pain which their introduction causes.

It seems to us that the use of bougies is only indicated where we are utterly unable, after fair trial, by any of the practised methods, of rendering pervious the tube to effect this end, and that then they should be used with great caution, their introduction being very painful, and sometimes causing severe inflammation.

Another deduction of Dr. Kramer's is, that "*air driven or blown into the Eustachian tube, through silver catheters, does not enter the cavity of the tympanum, i. e., does not circulate in it, but only to the end of the trumpet-like expansion of the tube, up to which point it circulates. Beyond this point it presses the there present column of air towards the cavity of the tympanum, to as great an extent as the still movable drum allows by curving outwards.*"

The experiments detailed are mostly made upon the glass apparatus and not upon the cadaver. It is sought to be proven that the air bath through the silver catheter will not remove or change the position of air and mucus collected in the cavity of the tympanum, the air blown in not reaching the middle ear, not circulating therein, but only pressing against the air already contained in the middle ear.

The daily clinical experience of every physician who uses the Eustachian catheter, proves sufficiently that blowing air through this instrument does act upon the drum and the contents of the cavity of the tympanum, breaking up recent morbid adhesions, restoring, for

* Schmidt's Year Book. New Sydenham Society, 1863. Tröltsch's Diseases of the Ear. American Edition, p. 157.

† Practische Beiträge zur Ohrenheilkunde, p. 29.

an instant, at least, the function of the tube which is to allow an interchange of air between the pharynx and the middle ear. These are therapeutic results on the living subject, which never so many experiments on a glass apparatus do not affect.

Another conclusion reached is, that *an elastic catheter can be passed into the tube as far as the isthmus, and from thence air can be blown into the cavity of the tympanum, air which will circulate in it; but this air will drive nothing out of the middle ear.*

This conclusion seems to be drawn from one experiment on the glass apparatus.

The last conclusion drawn from these nineteen experiments which we shall notice, is the following:—

Mucous collections in the Eustachian tube, as far as they may be contained within its trumpet-like expansion, may be easily removed by the forcing or blowing in of air; this will, however, be more or less difficult if the moist collections are found above this point. This is evidence in favor of Dr. Politzer's method of rendering pervious the Eustachian tube. (This method, as most of our readers are aware, consists in blowing in air at the moment the patient swallows, both mouth and nostrils being closed.) Dr. Kramer, however, speaks very slightingly of this procedure; he says:—"We see that Politzer's 'new method' is indeed *new*, but that in a diagnostic or therapeutic point of view it can only be remotely compared with the use of the catheter. Compared with this it is only a miserable resort in case of necessity, the employment of which, all pompous commendations to the contrary notwithstanding, stamps him who uses it with want of skill in the introduction of the catheter." This is a fair specimen of Dr. Kramer's style in dealing with an opponent, with any one who claims to have accomplished anything for aural pathology and therapeutics in any other way than by the employment of *his* catheters, *his* bougies, and *his* valvular handled speculum.

The remaining pages of this somewhat remarkable pamphlet are devoted to criticisms upon the aural surgeons of Germany and England—viz., Toynbee, Wilde, Yearsley, Von Tröltsch, Erhard, Voltolini, Schwartze, Lucae, Weber and Politzer.

The false positions and misstatements of the author have been sufficiently answered in the pamphlet before referred to—"A Vindication of the present state of Aural Surgery." Some of these positions, however, are still persisted in. He is most severe upon Toynbee and Tröltsch, because they have made the most dissections of ears. The fact that any surgeon examines a morbid ear, the history of which is unknown, is sufficient to excite a terrific volley from Dr. Kramer. He steadily ignores the fact that while it is true many specimens in Toynbee's museum, and many of Tröltsch's cases as reported in *Virchow's Archives*, are merely morbid and not pathological, yet enough have a sufficiently complete history, fully or in part, to substantiate the theories deduced from observations on those

where the history remains unknown. Each day is adding to the pathology of the ear by the examinations of complete cases. While we were penning this very article, our eyes chanced to light upon such an one by Mr. Hinton, of London.* We must confess we prefer the practice founded upon such researches in morbid and pathological anatomy, as have been made by the authors who are here so sweepingly and severely condemned, to that based on experiments with catheters and bougies on the cadaver and a glass apparatus. Dr. Kramer has found the judgment of the profession at large pronounced against him, a fact which he frankly acknowledges. "To my astonishment, the judgment of the profession has been given greatly in favor of Toynbee, so that I am not allowed any longer to withhold my views, which are directly opposite."—P. 23. The little book before us will hardly do anything to change the verdict of the American professional public.

We would be far from underrating the value of Dr. Kramer's labors in the field of aural surgery. He was a pioneer in the scientific study of this once obscure branch of our art, and he deserves our lasting gratitude; but his arrogance of assertion and sneers at honest work, at the only basis of a substantial therapeutical structure—pathological anatomy—can but do much to cause us to forget his really useful labors. Reviewers in America, even lately, have seen fit to class his works with those of men with whom he has been contending—to give them a higher place than it seems to us they deserve, and we have therefore attempted to show what his views really are, and the manner in which they have been presented.

Dr. Politzer's book, as is indicated by the title, contains chromolithographic representations of the membrana tympani, in a normal and morbid condition, with explanatory letter press. It is, in fact, a complete monograph on the anatomy and affections of the drum and cavity of the tympanum.

The illustrations are from drawings made by Dr. Politzer himself. Frequent comparison of these plates with cases under our own observation has shown us that they are accurate guides in the study of aural disease. Dr. Kramer regards the examination and study of the membrane of the drum as a matter of comparatively small moment, but the greater number of practitioners consider its careful study as essential to any complete knowledge of the affections of the external and middle ear. Kramer's words are:—"The inspection of the membrana tympani, so long as it is not perforated, teaches us nothing as to the pathological condition of the parts enclosed in the cavity of the tympanum."† Per contra, says Dr. Politzer:—"The expanded value of the examination of the membrana tympani for diagnosis is an acquisition of our own time. In noting, then, the progress of modern aural surgery, its importance cannot be

* Guy's Hospital Reports, vol. x., part 3.
† Ohrenkrankheiten, &c., p. 60.

overlooked, because it has to no inconsiderable degree narrowed the territory of nervous deafness, which was formerly such a wide one. Supported by the researches of pathological anatomy, the inspection of the membrana tympani, with its evidence of important changes in structure, has considerably advanced our knowledge of the morbid processes occurring in the ear."

The work is divided into sections, comprising--

I.—Anatomy. Inspection.

II.—Anomalies of Transparency and Color.

III.—Anomalies of Continuity and Curvature.

IV.—The Movements of the Membrane.

The scope of our article will only allow a glance at the subject-matter of these several sections, which we may probably best gain by quoting, as far as may be, the author's own words. Considering, then, the anatomy of the drum, we quote:—

"The shape of the membrana tympani depends upon the ring surrounding it. It varies from the elliptical to the irregular oval, and even to the heart-shaped. Hyrtl places the proportion of length to breadth as from 4.3‴ : 4.0‴. Tröltsch, the greatest long diameter from above downwards anteriorly as from 9 to 10 mm; the shortest from below anteriorly upwards, as from 8 to 9 mm. The deepest portion of the arch of the membrane, the so-called umbo, corresponds to the end of the handle of the malleus, where it is embedded in the layers of the membrane. It is imperfectly divided into halves, the anterior being the larger, by the long process, or handle of the malleus. It has two sets of vessels, fully separated from each other by the *substantia propria*, or middle and fibrous layer of the drum, which has no vessels of its own. These two sets of vessels anastomose on the periphery of the membrane, the outer belonging to the connective tissue between the epidermis and the radiated fibres, the inner to the mucous membrane.

"The nerves of the membrana tympani, which, according to Arnold, arise from the nervus temporalis superficialis of the trifacial, more exactly studied by Tröltsch, run in the external layers parallel to the vessels, in three or four very fine little branches, whose terminations are as yet unknown. Gerlach also observed in some cases, in the mucous layer of the membrane, certain fibres without medullary substance."

For the examination of the meatus and drum, Politzer uses the conical specula of Gruber, modified by Arlt, Wilde and Toynbee, preferring, however, those made of hard rubber, together with the glass reflector of Tröltsch. He thinks ordinary daylight preferable to all other sources of illumination. "The text-books give very different descriptions of the color of the membrana tympani. Some describe it as light, like glass, transparent. Others, as pearl gray, or entirely white. Some of the inconsistency of these descriptions is due to the fact that, while some have examined the membrane on

the dead body, others have observed the living; then, again, much may be ascribed to the different modes of examination, also to the age of the subject, which latter circumstance has a decided influence on the color. We should remember that the membrana tympani is a translucent, so-called dim, turbid (trübes) medium, which reflects a portion of the light thrown in upon it, allows a portion to pass through, illuminating the cavity of the tympanum. From the promontory lying opposite the membrane, the light, with some loss, however, is reflected back through the membrana tympani and reaches the eye of the observer. The color of the membrana tympani is, therefore, one of combination, depending on various factors, viz., the color peculiar to the membrane examined, the kind of light used as a source of illumination, and the number and color of the rays which pass out from the promontory." . . . . "In cases where the membrane may be described as normal, observed by ordinary reflected daylight, we may best compare its color to a neutral gray, to which a weaker tone of violet and light brownish-yellow is added." In one case of a membrane as clear as glass, Politzer saw through it, not only the long process of the incus, but also the side of the stapes. (Tafel I., B. 4.)

The light point, or triangular spot of light does not depend, as Wilde thought, upon the convexity of the membrane, for, as Tröltsch remarks, the spot is visible on the most concave as well as on the convex portion of the drum. "If the membrane were one plane surface, there would be no reflection of light whatever, its inclination to the external auditory canal being such that, in accordance with the laws governing reflection, all the light thrown upon it would be reflected upon the anterior and inferior wall of the meatus. If, however, the arch or curvature of the drum, by means of the traction of the handle of the malleus, undergoes a change in its inclination, so that its anterior portion is exactly opposite the axis of vision, the light thrown in upon this point will be reflected back to the eye of the observer. This may be proven by an artificial membrane stretched over a tube." . . . . "The light spot has generally a base of from 1½ to 2 mm; in some cases its continuity is broken. Sometimes its base reaches fully to the periphery of the membrane; sometimes, however, only its apex is seen."

Second. Anomalies of transparency and color.

"The transparency and color of the membrana tympani undergo in many cases varied changes in diseases of the ear, which, by means of inspection, furnish important standpoints for diagnosis. . . . Out of 100 normal hearing individuals, not more than 25 have a perfectly normal-looking drum."

The causes of opacities of the membrane are different. 1. They may depend on loosening and thickening of the epidermis. 2. Morbid processes in the dermoid layer. 3. Want of transparency in the fibrous layer. 4. Thickenings of the mucous membrane.

In other words, the cause of opacity may rest in one layer, or two, or in all combined.

Loosening of the epidermis occurs commonly in primary affections of the drum. It may result from hyperæmia of the external ear, induced by freezing, from frequent furuncular inflammation, from eczema or erysipelas.

In a normal condition the vessels of the membrana tympani are not visible; when a hyperæmic condition obtains, a broadly extending ramification of vessels is sometimes seen, and this hyperæmia, without any structural change, may produce want of transparency. Ecchymosis of the membrane may occur in acute catarrh of the cavity of the tympanum, or when acute symptoms supervene upon a chronic form of the same affection. These ecchymotic spots are more apt to occur in decrepit, marasmatic patients.

Complete opacity of the membrane, depending on want of transparency of the *substantia propria*, depends either upon transmission from the external layer, or upon affections of the internal structure. They may even occur primarily in advanced life.

The primary, independent opacities of the drum, as the author's investigations have shown, are in the greater number of cases owing to fatty degeneration of the fibrous layer. It appears occasionally, with no affection of the hearing, also to a high degree in long existing impairment of this function; in deafness depending upon anchylosis of the base of the stapes with the fenestra ovalis. A case is referred to on which the microscope showed small, isolated, and grouped fat corpuscles, which were collected in great numbers on the periphery, in the position of the *annulus cartilagineus*.

Opacities which are the result of changes in the mucous layer of the drum, are the most common of all, because they generally appear as symptoms of catarrh of the cavity of the tympanum, and, as is well known, this is the most frequent of affections of the ear. The mucous membrane, which in a normal condition is the thinnest layer of the drum, is none the less able, by a very mild degree of swelling, to cause a considerable degree of opacity of the membrane, and by hypertrophy of tissue, thicken this part more than four fold.

On the other hand, it is shown by *post-mortem* sections of decided opacities observed during life, in certain cases, that the stratum of mucous membrane was not at all affected, the opacity existing only in the epithelial layer. The origin of partial opacities in the middle layer of the membrana tympani, can be traced with great exactness, especially in that form of inflammation of the external and middle ear which is accompanied by purulent secretion. These opacities are doubtless to be regarded as interstitial effusions from the adjacent vascular layer. This view is confirmed by examinations of the cadaver.

Calcareous deposits in the fibrous layer occur often, and are easily recognized appearances. They occur in early as well as in

advanced life. Politzer has only observed these cases where the impairment of hearing was very great, except in a few instances, where there was a moderate amount of hearing. It is probable that in the former cases similar processes had occurred, either on the membrane of the fenestra rotunda or at the base of the stapes. How far these calcareous opacities of themselves affect the hearing, can only be determined by examination of cases where their existence is not complicated with other changes, if indeed they thus occur.

Politzer deduces the following results from his observations on the living and dead subject:—

1. Calcareous opacities in the membrana tympani are to be regarded, in the majority of cases, as products of purulent processes in the ear, the exudation in the *substantia propria*, from the adjacent tissues, having undergone the chalky metamorphosis. . . . Such calcareous concretions may occur, however, in the course of a chronic catarrh of the cavity of the tympanum, without any purulent action.

2. While examining a number of persons with normal hearing, the author found in a number of cases chalky formations in the membrana tympani, such as occur after a purulent process.

To take a general view of opacities of the membrana tympani, we conclude:—

1. Morbid processes in the membrana tympani are for the most part combination symptoms of affections of the external and middle, seldom of the internal ear.

2. They occur very commonly in the various diseases of the ear, and furnish important aids in diagnosis.

3. Anomalies of continuity (perforations) and arch (wölbung) of the membrana tympani.

The most frequent origin of the perforation is by extension of a purulent process from the cavity of the tympanum. Blows on the head, concussion, are also causes. The disturbances of function which arise as consequences of a perforation of the membrane, as has been long since shown by various authors,* is in no proportion with the loss of substance. . . . The changes on the fenestra of the labyrinth are those which cause considerable impairment of hearing. If the mobility of the stapes upon the fenestra ovalis be not considerably impaired, and the membrane of the fenestra rotunda not very much thickened, the waves of sound, the membrana tympani being absent, pass directly to the stapes, through the malleus and incus, and reach the labyrinth in a considerable number. . . . . .

The condition requisite to the healing of a perforate drum, is the checking purulent and excessive mucous secretion from the cavity of the tympanum. So long as these latter continue, any permanent cicatri-

* Dr. E. H. Clarke. American Journal of the Medical Sciences, January, 1858.

zation of the drum is simply impossible. In a certain class of cases the membrane heals with complete restoration of the hearing, without any evidence of perforation. This is more common in acute purulent catarrh, occasionally after a chronic purulent process.

Although not strictly pertaining to the subject in hand, Dr. Politzer gives a sketch of his treatment for chronic catarrh of the cavity of the tympanum. "Having examined the condition of the meatus and drum, and having ascertained how well the watch and conversation are respectively heard, we proceed to the examination of the tube, either by means of the catheter or the air-bag (Politzer's method), convincing ourselves of the passage of the air, by means of the otoscope. If this inflation of the cavity cause any increase of the hearing power, and we can from this diagnosticate a swelling, with secretion from the mucous membrane, injections of an astringent, such as sulphate of zinc, through the tube, by means of the catheter and air-bag, are indicated, using a solution of from four to eight grains to the ounce of water. The catheter is passed into the mouth of the tube, held in position by the left hand, the solution, dropped into it from a glass tube, is then drawn into the cavity of the tympanum by means of the air-bag, the patient swallowing at the same time. The injections should be made every three days, and continue from three to five weeks.

"If, however, our (diagnostic) inflation of the cavity of the tympanum produce no effect whatever on the hearing, we can conclude that the impairment of function depends on the product of catarrhal inflammation—i. e., thickening of the mucous membrane lining the cavity of the tympanum and covering the *ossicula auditus*, with rigidity and impairment of motion of these latter. We would then employ the air-bath in connection with moderately irritating injections, such as ℞. Sal. ammoniæ, ℈ i.; aq. destillata, ʒ i. M.; or ℞. Potass. iodid., gr. x.; aq. destillata, ʒ i.; or, ℞. Natr. chlorat., gr. v.; aq. destillata, ʒ i. M. Continue this treatment, with intervals of three days, as above, from two to four weeks. A long-continued, uninterrupted inflation of the cavity of the tympanum is never advisable. . . . . The introduction of elastic bougies through the tube, in case of its narrowing, is sometimes of benefit."

Fourth. Anomalies of arch or curvature of the drum. Under this head are comprehended swelling, abscesses, granulations, collapsed membrana tympani, &c. Here only anatomical and pathological knowledge, with a proper apprehension of the course of the morbid process, will break the way for a correct diagnosis. "When, therefore, the privy medical councillor, Dr. W. Kramer, of Berlin, describes the results of the physiology and pathological anatomy of the ear as of no value in aural surgery, we can only pity the man who, grown gray in the midst of constant contradictions and quarrelling, has won for himself a truly sad name in the annals of sci-

ence, through his incessant outburst of rage against the modern progress of aural surgery."

Fifth. Movements of the membrana tympani. If we observe a normal membrane, either while the Valsalvian or Politzer's method of inflating the drum is practised, or when air is driven through the catheter, we do not see the handle of the malleus change its position (although it makes an excursion of from $\frac{1}{4}$ to $\frac{1}{2}$'''). Sometimes the posterior segment of the membrane moves strikingly, and often a new light spot appears. The light spots advances, often becomes indistinct; to a very different degree, however, in different persons. When the pressure of air ceases, the membrane recovers its normal position.

There is, however, a different state of things in diseases of the middle ear and in changes on the membrana tympani. When the Eustachian tube is impervious, and the stream of air used will not overcome this impermeability, or in cases of adhesions of the drum to the inner wall of the cavity of the tympanum, or in any considerable thickening of the membrane, we will not be able to discover any movement of the drum. An irregular movement in certain parts will occur when there are isolated adhesions, irregular thickening, cicatricial formations or partial atrophy of the membrane. In other cases, when the Eustachian tube is abnormally widened, and the stream of air passes with full power into the cavity of the tympanum, the excursion of the malleus will be the greater, the more the membrane has lost its elasticity by atrophy of any or all of its layers. . . . Rarefication of the air in the cavity of the tympanum also produces visible movements of the drum. If a patient swallow, with the nostrils and mouth closed, we see the light point change its form. Sometimes the appearance is as if the light point were pushed outward. Hence, perhaps, arose the erroneous opinion that in the act of swallowing with the nostrils and mouth closed, air was pressed on to the cavity of the tympanum. . . . At the first movement of the act of swallowing, a very slight densification of the air takes place, but immediately rarefication occurs. . . . In a normal membrane no motion takes place during the act of swallowing, the nasal passages being open. The column of air circulating in the pharynx and communicating with the cavity of the tympanum is not powerful enough to overcome the one pressing upon the drum from the outside.

During respiration, as a rule, there are no movements of a normal membrane. They only occur in rare cases as synchronous to-and-fro motions, when we must infer a gaping of the faucial orifice of the tube. Quickly-repeated, violent respirations will, however, sometimes produce a movement of the drum. It is an erroneous idea that at each tranquil respiration the tube opens and a consequent motion of the drum occurs.

Pulsation in the membrane is not an uncommon appearance.

Wilde called our attention to its existence in perforation of the membrane as pathognomonic of the loss of substance. Politzer has shown, in a previous communication,* the existence of pulsatory movement in a drum while it is intact, and these observations have been lately confirmed in private communications from Drs. Tröltsch and Schwartze. The normal drum does not pulsate, but pulsations can be excited by frequently touching it; also injection of the vessels. Even then, inspection will not be able to detect it; but by fastening a rice straw by means of gum to the membrane, the external end of the little indicator will be seen to move synchronously with the pulse. Pulsation in a perforate membrana tympani occurs as a result of the expansion of the vessels of the swollen and loosened membrane of the cavity of the tympanum and of the drum itself, narrowing the space and pressing the collected secretion and air against the perforation. The monograph closes with a few remarks as to the importance of a knowledge of the appearance of the membrana tympani in a medico-legal point of view, and in cases of suspected malingering.

We are aware that the quotations and condensations we have thus made do not adequately represent Dr. Politzer's little book, and of the danger of separating an author's opinions from their proper surroundings. Yet in the pages of a journal aiming to equally represent all that is progressive in modern medical literature, our rapid review, which we trust may furnish at least new subject-matter for thought and investigation, is all that can be allowed us. D. B. St. J. R.

HISTORY, THEORY AND PRACTICE OF SYPHILISATION.

By Professor W. Boeck, of Christiania.

Delivered in the Theatre of the Meath Hospital and County of Dublin Infirmary on Friday, June 2, 1865.

Gentlemen,—I have been requested to deliver a lecture upon syphilisation: I willingly comply with this request, as Dr. Moore has had the goodness to translate my lecture, but I must apologize for my imperfect pronunciation of your language.

By syphilisation I understand the mode of treatment by which, by repeated inoculations of syphilitic matter, taken from primary sores, I bring the body into the condition that it is no longer susceptible of the action of the syphilitic virus.

It will, perhaps, be agreeable to you, Gentlemen, before I proceed further, that I should lay before you a short *résumé* of the history of this mode of treatment. Auzias-Turenne, of Paris, performed inoculations of syphilitic matter upon animals in order to see whether this virus could be transferred to them, which up to that time had

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* Zeitschrift für Pract. Heilkunde, 1862.

been denied. In this he was at length successful, and it was chiefly apes which could with the greatest facility be inoculated. After chancres had been repeatedly produced in the same ape, a great many sceptical physicians wished to see his inoculation, and a meeting was appointed in the *Jardin des Plantes;* the old ape was inoculated, and a still greater crowd assembled a few days later to see the result. But when the ape was brought in nothing was to be seen. It may easily be imagined how this result was received, and that Auzias-Turenne was ridiculed, but he did not on that account give up the method: he continued his inoculations, found that the old ape was not susceptible of fresh inoculations, but that a second ape after inoculations got chancres, though this ape also after a series of inoculations became unsusceptible.

Auzias-Turenne now saw clearly that he had here a natural law, in itself resembling that which your immortal Jenner had discovered in the inoculation of vaccine matter, and we shall not upbraid him that his French blood now carried him away, and that his first idea was to employ the inoculation of syphilitic matter like that of vaccine matter—as a prophylactic. We cannot gainsay him that his train of ideas is logically correct, but it is not practically correct, for the great rule is, that he only gets syphilis who himself will have it.

As the result of this idea of employing syphilisation as a prophylactic, my friend Auzias wished at the time to syphilise all public girls, seamen, and soldiers, and he would willingly have syphilised us all. No wonder, then, that such an idea met with all the opposition it deserved; but it was not long until Auzias renounced his error, and at the same time there appeared an Italian, Sperino, of Turin, who showed, by a series of experiments, that the syphilitic disease was cured during these inoculations, which Auzias, too, at the same time, demonstrated. Still, this failed to reconcile physicians to the new method; such a prejudice had been raised against it that both the Académie de Médecine of Paris and the Academy of Turin condemned it without having the necessary materials before them for passing any judgment; the paradox involved in this method appeared to all so enormous as to render proofs of its absurdity unnecessary.

Lecturing in the University of Christiania upon syphilis, and having a section of the Hospital devoted to this disease, I carefully investigated all that was advanced upon this subject, and ascertained that there must be some truth in it. I had, through a period of very many years, found that our treatment with mercury is highly unsatisfactory; I therefore considered that, from my position, it was my duty to give a trial to this new method, although it appeared to me as paradoxical as it did to all the world, and notwithstanding that it had been condemned by two Academies. But before I began, I laid down for myself certain limits, to which I still adhere. It will

be at once observed that I will not speak of the method as a prophylactic: this would be immoral; but neither am I at liberty to employ it in every case of syphilis; it is only when syphilis has become constitutional—when the syphilitic virus flows with every drop of blood through the system—that I allow myself also to inoculate it upon the skin.

The next question is, whether I shall employ syphilisation in every case of constitutional syphilis?

By a fortunate coincidence it happened that of the two individuals whom I first took under treatment by syphilisation, the one had not been treated for syphilis, while the other had been the subject of all the resources of our art. In the first the inoculations proceeded without difficulty, the symptoms gradually disappeared—in a word, I found myself upon the beaten path. In the other case all was irregular, I could effect no order at all, and when my first patient was well, the phenomena in the second were still in full bloom. I immediately began to suspect that it was to the medicines previously given that this result was attributable, and on subsequently investigating this opinion, its truth has been most completely confirmed; so that I have made it a general rule to syphilise only those who have not previously been treated with mercury, whether this has been employed for primary or constitutional symptoms. But if I be asked whether syphilisation has not some effect in these cases, I can answer decidedly in the affirmative—it often acts incredibly. Dr. Simpson, of Edinburgh, has recently described two such cases, which were sent over to me by Prof. Simpson; what is there stated corresponds precisely to what I have myself noted, and of which any one may satisfy himself. But the reason why I do not undertake the treatment of such individuals is to avoid having relapses, which in these cases are apt to occur.

Now, in order to make my usual mode of proceeding as plain as possible, I shall suppose that a person laboring under primary syphilis consults me. In this case I treat the primary sore as a simple ulcer—I prescribe a weak solution of sulphate of zinc or such like, and occasionally employ a slight cauterization with nitrate of silver; I give no internal medicine, but make the patient come to me once or twice a week, that I may observe when the constitutional symptoms break out, for the earlier syphilisation can be commenced the better. So soon as I perceive the first constitutional signs, I commence the treatment by taking matter from an indurated chancre or from an artificial pustule in a patient under treatment by syphilisation. I inoculate first on both sides of the chest, and make three punctures with a lancet, precisely in the mode adopted in vaccinating. After three days pustules are developed, and then I inoculate again in the sides, taking the matter from the pustules produced by the first inoculation, observing carefully to make the second inoculation at a distance from the first, so that the sores may not

become confluent. At the end of three days I make the third inoculation, taking the matter from the pustules of the second inoculation; and I now continue to inoculate on both sides every third day, always taking the matter for the fresh inoculation from the pustules last formed, so long as this matter continues to afford a positive result. When it no longer takes, I procure new matter in the same mode as for the first inoculation, and continue with this as with the first. This second matter will yield smaller sores and a shorter series than the first, and when it no longer takes I procure a third and proceed in the same manner. This third matter will produce very little effect, and I therefore pass to the upper arm, where I proceed in precisely the same mode as in the sides; and when no effect is any longer visible in the upper arm I remove to the thighs, and continue there in the same way as in the two preceding places. By the time the inoculations are here brought to an end, from three to three and a half or four months have probably elapsed, the symptoms which manifested themselves from the commencement have disappeared, or if some slight symptom has remained this disappears spontaneously. It often happens that during the treatment a fresh outbreak takes place, and he who is not acquainted with the method believes that some other plan must now be adopted; another infers that syphilisation is of no avail. But, let them not be deterred by any symptom, not even by the most severe iritis, which never requires anything but the instillation of a little atropia. But, happen what may, let them shut their eyes to it and continue the inoculations. The patient who, during the whole treatment, can attend to his business, feels, after it is completed, perfectly well, and may immediately expose himself to any hardships. He can endure wet, cold—in a word, everything which after mercurial treatment would render him liable to life-long illness. It is probable that I may now be asked as to the result at a later period for these individuals, and I shall speak first of the relapses. On the whole, I have treated 429 individuals, and of these 45 have come back, making about 10½ per cent.; but, as we may calculate that some of those treated during the last year will return, I will assume that the relapses will amount to 12 or 13 per cent. But, let us now examine more closely what is called a relapse after syphilisation. In many instances a single mucous tubercle, a small white spot on the tongue or in the throat—symptoms for which nothing more than external means are employed, and for which the patients are treated only for a few days in hospital. So far as I at this moment remember, thirteen were taken again under treatment with syphilisation, and two with iodide of potassium.

You will next ask whether tertiary symptoms have been developed in any of them. This has been the case, I believe, with three; but at the same time these individuals have been perfectly well—their general health has not, as so often happens after mercurial

treatment, been broken down, and in those who have had relapses it has been good, as it is evident that in those who have had no relapse it has been particularly good.

We come now to the children of those who have been syphilised. Here we are not much better off than after the mercurial treatment; we see the same rule to prevail as after this last method, namely—that when the mother has been syphilitic, the first child or children is or are syphilitic; that they are healthy is the exception. If the father has been syphilitic, the children are, in general, healthy; that they are syphilitic is the exception.

You will next propose to me the question how I treat syphilitic children. I treat them precisely as I do adults; and it is interesting to see that the sores in these little ones bear in size a proportion to that of the child, and that the patients suffer less, and not more, than adults. The results of syphilisation in children with hereditary syphilis have not been brilliant; of forty-two children, twenty-two died, but I have taken under treatment every case that I have met with, and every one knows that in such children there are very often affections of the internal organs which lie beyond our power to cure. I cannot at this moment say how many little children with acquired syphilis I have syphilised, but they are not few, and of these only one died, the cause of death in that instance being croup after I had performed tracheotomy. Of adults, two died—an old woman of dysentery, and a young woman of puerperal fever. This last case I forgot to include in the *résumé* I have given in the *British Medical Journal*.

Now, in order to give you a definite idea of the confidence I have in this method after having practised it daily for thirteen years, I shall say only that if I myself, or any of mine, were so unfortunate as to get syphilis, I should employ no other means than syphilisation.

Still, a few words in conclusion, gentlemen. Vaccination has for many years stood alone; syphilisation now comes to join it. Shall we stop here? I believe not. Vaccine and the syphilitic matter are both animal viruses; we see them contained under a similar law. May not also the other animal poisons be referred to a similar law? We see that Nature is simple in her diversity: should this not also here be the case?—should not glanders, hydrophobia, &c., some time be curable? Let us all seek to clear up this dark point in our science, and let us not, as hitherto, with respect to syphilisation, seek only to extinguish the rising gleam.

[Among the crowded auditory present during the delivery of the foregoing address were:—The President of the King and Queen's College of Physicians in Ireland, the Regius Professor of Physic in the University of Dublin, Sir Wm. R. Wilde, the Professors of Surgery and of Materia Medica in the Royal College of Surgeons, the Rev. Prof. Haughton, M.D., F.R.S., Prof. Banks, Mr. Tufnell, Mr.

Morgan, Drs. Smyly, Bennett, Banon, Martin (of Portlaw), Fleming, Head, Hardy, Hayden, Byrne, Moore, &c. &c. On the conclusion of the lecture, the President of the College of Physicians proposed, and Mr. MacNamara seconded, a vote of thanks to the learned Professor for his very lucid and interesting exposition, which, notwithstanding the disadvantage of speaking in a foreign tongue, he had so admirably delivered. The vote of thanks, which passed unanimously amid great applause, was conveyed to the Professor in suitable terms, on the part of himself and of the students, by Dr. Stokes. —*Medical Times and Gazette.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, AUGUST 3, 1865.

PLAGIARISM.—Possibly there may be among those of our profession connected with medical journalism in this country some happy individual who finds the duties of his situation easy. The medical district whose interests he represents may show its sympathy with his efforts by filling his desk with copy before the dogdays, that ever-recurring season of editorial panic, approach, and his labors may be lightened by the pleasant reflection that they are at least remunerative. We like to believe that there may be even among us that proverbial exception to a general law, and we trust that if he is to be found in our list of exchanges, he will announce himself. We have, in fact, given over expecting much sympathy or voluntary assistance from our professional brethren, for we are convinced that they do not really understand how much we need them. On the other hand, it is satisfactory to our future to reflect that the definition of complete human happiness among those who in their past have attempted the management of a medical journal is the sensation of relief from editorial responsibility. We do expect, however, from all engaged in these duties a proper appreciation of the difficulties attached to them and an observance of that mutual courtesy and highmindedness which should characterize the public representatives of a noble profession.

We are sorry to be obliged to confess, however, that a portion of our medical press is not always conducted in accordance with the principles of common honesty even. Within the past few years we have repeatedly observed that articles have been taken from our JOURNAL and re-published in others, without any expression on their part as to the source from which they were derived. It is undoubtedly a flattering mark of approval to find one's labors so widely appreciated, but then the compliment would be more satisfactory if it were a little more personal. A certain latitude is, we are aware, assumed by the medical, as well as the general press, in copying extracts from other journals, or bits of first-hand information, without mentioning that from which they were last taken, but even this is avoided by the best organs when the article is of any length or of any but the most general character. It is not of this form of borrowing without thanks that we now speak, but of the more serious matter of abstracting communications or editorials, and re-publishing them either as selec-

tions without any credit to their authors, or as entirely original articles. This is plagiarism.

We do not make this charge against the medical press as a whole, for there are many journals in the country, and by far the largest part, which would as soon steal type as be guilty of such a breach of mutual courtesy, but we will merely turn to the exchanges which happen at this moment to be lying upon our table for its substantiation.

In the *Cincinnati Lancet and Observer* for January, 1865, we find an article which was communicated to our JOURNAL, re-published in full, without any reference to its author or the source from which it was taken.

In the *Eclectic and University Medical and Surgical Journal,* Philadelphia, June, 1865, will be found a leading editorial on the Russian epidemic, beginning in this way: "Suddenly the world has been startled by the intelligence that a fearful pestilence is ravaging Eastern Europe." Can it be a coincidence that, on the 27th of April, we published an article on the same subject which began as follows?— "Of a sudden the world is startled by the intelligence that a fearful pestilence is ravaging Eastern Europe." And so the two run on. The same Journal, in March, copies an extract we had selected from Waitz's Introduction to Anthropology on "The Healing Power in various Nations," without mentioning that it was indebted to us for the same. It may be interesting to add that the editor of this Journal is Professor of the *Principles* and Practice of Medicine in the Philadelphia University.

In our issue of June 9th, 1864, there appeared the report of a case of Spontaneous Thrombosis, which was extracted from and credited to the *Medical Times and Gazette.* This was followed by a long editorial note containing an account of similar instances in our own experience. This extract was copied by the *Ohio Medical and Surgical Journal* and properly referred to its English source, but our comments were inserted as their own.

The *American Druggists' Circular and Chemical Gazette,* an excellent journal and one generally careful in giving credit where it is due, in its last number paraphrases our recent editorial on the Starvation of Prisoners, inserting the extracts we gave from the Sanitary Commission pamphlet in the same transposed order as they occur in our JOURNAL.

The *Dental Register of the West* for July, 1865, re-publishes a recent communication to our JOURNAL on Bantingism and Obesity, which it attributes to the *Dental Cosmos,* and the items of Foreign Medical Intelligence, which are selected by us from English, French and German journals, have been repeatedly copied collectively by some of our exchanges without any acknowledgment.

These are but a few instances of the many, and by no means the worst, which we might expose by referring to our files of exchanges, but they are enough to serve our present purpose. Some of them are, we hope, the result of mere carelessness, while of others, perhaps, the less said the better. A medical journal, to perform its responsible duties of guardian and critic, should keep its own garments pure, and we look to other editors to aid in preventing such offences against the honor of our calling.

Adipocire.—Dr. Speir, of Brooklyn, exhibited a specimen taken from the body of a lady 45 years of age, who had been a patient of Dr. J. D. Connolly, of Brooklyn. The patient was attacked in December last with a very severe pain in the left hypochondriac region. Dr. C. was called and made an examination of the chest, suspecting the existence of some pleurisy or some disease of the heart. Opiates and other anodynes were prescribed, but failed to relieve her, and subsequently the hypodermic injection of morphine was tried. The patient stated to her attending physician that she had suffered from the same symptoms previously. Dr. Connolly being unable, as the result of a second examination which he gave her, to make out a diagnosis, called a consultation, consisting of Drs. Crane and Enos, but these latter gentlemen failed also to come to any conclusion as to the nature of her ailment. The lady died on Monday last.

The first thing which struck Dr. Speir, who made the autopsy, was the great amount of adipose tissue which had been developed, it being about two inches in thickness over the chest and abdomen. The chest contained in both pleural cavities a small quantity of serum; the lungs were normal, except, perhaps, an increased hypostatic congestion at the base of each. The heart was normal. The abdomen contained a sero-purulent fluid. There were evidences of peritonitis present, and at different situations the surfaces of the intestine were glued together. In an attempt to remove the stomach, Dr. Speir thrust his hand through a mass which felt like hardened fæces, and a perforation was accordingly suspected. Careful search was made of the stomach and intestine, but nothing of the sort found. This soft substance proved not to be fæces. There was about a pint of it scattered throughout the left hypochondrium, in the mesentery and in the surrounding adipose tissue. It was adherent to the diaphragm, and seemed as if it originally started from that organ. The microscopic examination showed only crystals of margaric acid, while some fibres of connective tissue in a state of fatty degeneration seemed to run through it. Dr. Speir thought it to be an example of adipocire.

In answer to a question in relation to the cause of the symptoms, Dr. Enos stated that he had seen the patient several times, and had come to the conclusion, with the other gentlemen, that it was explainable on the supposition of the existence of pleurisy with effusion. In conclusion, he remarked that the substance alluded to by Dr. Speir was very remarkably situated, as it was in such a relation to the diaphragm, and not enclosed in a cavity of any size.

Dr. Voss asked if it might not have been cancerous disease of the mesenteric glands.

Dr. Speir replied that there were no evidences of such a disease presented by the microscope, but he thought it reasonable to suppose that the mesenteric glands might originally have been the seat of the degeneration just described.—*Proceedings of the New York Pathological Society*, in *New York Medical Journal.*

Dr. Felix Robertson, the first white male child born in Nashville, died in that city on June 9th at the age of 84. He was the sixth child of Col. James Robertson, the pioneer of the Cumberland settlement. The settlers arrived there during the winter of 1779–80, and the deceased was born on the 11th day of January, 1781. He studied

medicine, and became an excellent physician. He introduced the use of quinine into that section of country, and was repeatedly elected President of the Tennessee Medical Society. He was a prominent politician in former days, and a warm friend of Andrew Jackson.—*Medical and Surgical Reporter.*

George W. Burke, M.D., of Middletown, Ct., has had awarded to him the "Russell Prize" by the Connecticut Medical Society, for the best essay on the subject proposed, viz., "*Prophylaxis as it relates to Phthisis Pulmonalis.*"—The Ives Prize Committee of the same Society, to whom was assigned the duty of selecting subjects for dissertations, and of awarding the premium for that which they shall decide to be the best, submit the following:—I. Cerebro-spinal Meningitis. II.—An Inquiry into the Therapeutic Value of Mercury and its Preparations. Competition for the prize will be limited to practitioners of medicine now resident of the State, and the author of the successful dissertation on either of the subjects named, will receive the premium of fifty dollars. Dissertations on the foregoing subjects must be transmitted to the Chairman, Isaac G. Porter, M.D., New London, on or before the first Wednesday of April, 1866.

American Medical Association.—Members desiring copies of the *Transactions* for 1865 must forward their subscriptions ($3) immediately, as the number of copies published will be but slightly in excess of the number of subscriptions. Wm. B. Atkinson,
Permanent Secretary, 215 Spruce St., Philadelphia.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, July 29th, 1865.

DEATHS.

	Males.	*Females.*	*Total*
Deaths during the week - - - - - - -	67	48	115
Ave. mortality of corresponding weeks for ten years, 1853—1863,	50.4	45.6	96.0
Average corrected to increased population - - - - -	00	00	106.1
Death of persons above 90 - - - - - - - - -	0	0	0

Pamphlets Received.—Report of the Recording Clerk of the Hospital Department, and the Physician and Superintendent of the Insane Department of the Philadelphia Almshouse, for the year ending Dec. 31st, 1864.—On the Direct Influence of Medicinal and Morbific Agents upon the Muscular Tissue of the Bloodvessels. By R. Cresson Stiles, M.D., Physician to Kings County Hospital, N. Y.

Married,—In Roxbury, July 28th, Dr. Lorenzo B. Dutton to Miss Lucy A. E. Dadmun, both of Roxbury.—In Rindge, N. H., July 19th, J. H. Darling, M.D., Surgeon U.S.N., to Miss Carrie M. Burnham.—In this city, June 14th, William P. Parr, M.D., of Indianapolis, Ind., to Miss Hattie F. Plaisted.

Deaths in Boston for the week ending Saturday noon, July 29th, 115. Males, 67—Females, 48. Accident, 5—apoplexy, 2—inflammation of the bowels, 3—congestion of the brain, 1—inflammation of the brain, 1—cancer, 1—cancrum oris, 1—cholera morbus, 1—cholera infantum, 22—consumption, 8—convulsions, 3—diarrhœa, 6—diphtheria, 1—dropsy of the brain, 7—drowned, 2—dysentery, 9—typhoid fever, 2—gangrene, 1—disease of the heart, 2—homicide, 1—infantile disease, 5—disease of the liver, 2—congestion of the lungs, 3—disease of the lungs, 1—inflammation of the lungs, 2—marasmus, 5—old age, 2—rheumatism, 1—scrofula, 2—smallpox, 1—sunstroke, 1—tabes mesenterica, 1—teething, 1—tumor, 1—unknown, 4—whooping cough, 2.

Under 5 years of age, 67—between 5 and 20 years, 13—between 20 and 40 years, 13—between 40 and 60 years, 8—above 60 years, 14. Born in the United States, 86—Ireland, 19—other places, 10.

THE

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CASES OF UTERINE DISEASE.

[Read before the Boston Society for Medical Observation, March 20th, 1865, and communicated for the Boston Medical and Surgical Journal.]

BY LUTHER PARKS, M.D., BOSTON.

CASE I.—June 2d, 1864. Miss ——, æt. 21. She considers herself of good constitution naturally. She has been a teacher in a Boston grammar school for several years; has been very ambitious to take high classes, and to bring her pupils up to a high standard of excellence. She also applied herself very closely as a pupil, so that her mind has been in a state of tension for the last eleven years. About a year since, she took cold at a monthly period, the flow of blood being interrupted, and hysteria setting in. She has never been so well since.

On Christmas day she skated to excess, the menstruation being then present.

The following symptoms have been gradually increasing upon her, viz.:—hysteria, in the form of laughing and crying without sufficient cause; vigilance; menorrhagia, without, however, irregularity of the periods; stricture at the præcordia; backache; pain in the groins; sense of sinking and dragging in the pelvis, to the extent that she has worn a supporter. She has lost flesh and appetite; and there is general debility, so great that she has given up school and taken mostly to her chamber, depressed in body and mind. In short, she is broken down, being now disinclined to any effort, even that of receiving her friends. The skin is of a waxen cast, even to the hands. The bowels are costive.

By digital examination, it was ascertained that, with a small vagina, admitting only a small-sized virgin speculum, the uterus was enlarged and tender; the cervix lengthened.

The speculum showed the neck bathed in leucorrhœa, red and swollen, as if from congestion. The os was directed backwards, so that it could not be brought into the field of the speculum.

Nitrate of silver was applied. The cervix was scarified, with the

discharge of a moderate quantity of blood. The patient was directed to regulate the bowels with laxative diet.

June 4th.—I was called to see the patient on account of flowing, which had set in, causing some alarm, though it was less in quantity than that which has been usual at the menstrual epoch for some time past. I referred it to the operative interference.

7th.—The symptoms are slightly mitigated, the sanguineous discharge having ceased. The uterus looks pale. It was lanced, with a moderate flow of blood. Nitrate of silver was freely applied.

17th.—An issue was made upon the anterior lip of the cervix with a cylinder of potassa cum calce.

24th.—The patient feels somewhat better, and has gained flesh. The eschar from the potassa cum calce has disappeared, leaving the appearance of an abrasion. A fresh issue was made with the potassa cum calce, and nitrate of silver was also applied.

July 1st.—During the last week, the general symptoms have further improved, and to a more marked degree than previously. The hysteria, particularly, has lessened. The anterior lip of the uterus is seen to be honey-combed, and reddened at the seat of the issue. The cervix is, however, smaller, and, for the first time, I am able to see the os uteri, which is not abnormal in appearance.

7th.—The patient feels better in every way. An issue was made as before, and nitrate of silver was applied.

15th.—She has had an attack of diarrhœa, with nervous symptoms. Both are now better. The eschar from the last issue is fresh and bright. Nitrate of silver was applied.

22d.—There has been another attack of diarrhœa, producing some weakness. It was controlled by astringents and opiates. The last eschar is not yet healed. Nitrate of silver was applied. The patient is to make a visit of some weeks in the country, and to take tincture of muriate of iron daily.

Sept. 20th.—The patient has returned from the country. The strength and flesh have improved, and the symptoms generally. A short walk, however, still tries her, and she has her days of despondency. The body of the uterus is presumed to be no longer enlarged, as no portion of it can now be distinctly reached. The cervix is smaller, but bathed in leucorrhœa. The os is well in sight, and natural. A slight abrasion is seen. Nitrate of silver was applied to the cervix and inserted into the os. The iron is to be omitted, and replaced by the following prescription:—℞. Tr. gentian comp., ʒ i.; alcohol, ʒ iij. M. Dose, one tablespoonful twice a day, to be well diluted with water. The object of the dilute alcohol was to afford an active stimulant, which would not act as an astringent, as brandy; or as a laxative, as does sometimes whiskey.

28th.—The symptoms improve. The uterus is almost healthy, except in the size of the cervix. Nitrate of silver was inserted into the os and applied to the cervix.

Oct. 8th.—There being an improvement in the spirits and strength, the medicine is omitted, to give place to the iron, the use of which I wish to persevere in. Nitrate of silver was used as before.

14th.—She bears the iron well. There is a decided gain in flesh and spirits. Nitrate of silver as before.

Oct. 21st.—The patient is about the same. About this time the patient commenced the use of whiskey on going to bed. Nitrate as before.

Nov. 4th, 11th, 21st, the patient was steadily improving. Nitrate of silver was used at each date.

Dec. 5th.—She has been less well for a day or two, perhaps in consequence of fatigue. She has exerted herself a good deal for a week past. She rallies, however, from prostration more readily than she used to. The cervix is noticed to be shorter. Nitrate of silver.

Dec. 20th.—Miss —— began teaching again yesterday. She is much prostrated by it. She has had an increase of leucorrhœa for a week past, and has not been quite as well generally. She says teaching excites and exhausts her. I find some increase in the fulness and redness of the cervix. I used the nitrate of silver, and ordered alum injections.

Jan. 4th, 1865.—The patient feels better, but is still much prostrated by teaching. The increased fulness of the cervix remains, with, however, less redness. I applied potassa cum calce and nitrate of silver.

11th.—The patient is improving again. There is less fulness of the cervix. The eschar made by the potassa cum calce is quite marked. Nitrate of silver was applied.

18th.—She volunteers to say she is decidedly better. Teaching begins to wear upon her less. The uterus appears in every way better. The eschar is still distinctly visible.

28th.—She is improving. The cervix uteri not diminishing in size as rapidly as I could wish, and the last issue having healed, I apply potassa cum calce.

Feb. 8th.—She is steadily improving in all respects. The eschar of the last issue is of the size of a dime, nearly, and is distinct. Nitrate of silver was applied.

15th.—There remains an abrasion at the seat of the eschar produced by the potassa cum calce. There has been rather more leucorrhœa for a few days. The cervix is not quite as small as I could wish, but I expect to be able to discontinue all treatment in a short time. The patient has taken a lower class to teach than formerly, and carries off her labors quite lightly. She sleeps generally well; she is in good *embonpoint*. Her strength is gaining daily. The waxen hue is gone, and is replaced by a decidedly ruddy color. In a word, she is in advanced convalescence.

March 1st.—Made my last visit, recommending the continuance of the iron some time longer.

My theory of the case is this:—There was, first, to use Marshall Hall's term, great "disorder of the general health," including impairment of the digestive, and perversion of the nervous functions; secondly, a local lesion—viz., congestion with hypertrophy of the uterus. The former I attribute to long-continued tension of mind and application to arduous duties; and I think it was in turn the predisposing cause of the second phase of the case—the local lesion, the exciting causes of which were very probably the interrupted menstruation and certain imprudencies.

Case II.—April 25th, 1864. Miss ——, æt. about 31. Has been under my care at various times for the last eight or ten years for attacks of subacute pharyngitis. From the aspect of the patient and the symptoms presently to be described, I infer a cachectic state of the system. The throat affection has been helped, and sometimes relieved, by applications of solutions of nitrate of silver. But iron, tonics and other drugs have been tried, without effect on the general health. It should be mentioned that there has been, at times, much swelling of the tongue, and that the patient thinks she took a good deal of mercury, while under the care of another practitioner, during a fever some years ago.

Some four years ago, swelling and hardening of the right breast set in to a marked degree, leading to fear on the part of the patient of cancer. The swelling was aggravated at the menstrual epochs. Freedom from adhesion and other considerations led to a diagnosis that the tumor is benign, and the stationary and perhaps retrograde course of the affection has confirmed that opinion. The left breast subsequently became affected in the same way, though to a less extent.

This lesion led to inquiry as to the state of the womb, and it was finally acknowledged, some three years since, that there were uterine symptoms, but the patient did not submit to a vaginal examination till this date. The symptoms now are—costiveness; anorexia; loss of strength and flesh; great nervous irritability; hypochondriasis; palpitations; stricture at the præcordia; mammary enlargement and hardening; pain in the back and groins; sense of emptiness and dragging down in the abdomen; painful micturition. The menses are regular in periodicity, rather large in quantity, but are preceded by about five days of extreme general *malaise* and prostration. During these five days the patient has a peculiar pinched expression of countenance, and there is also a slight bloody discharge from the vagina. The patient is cognizant of this discharge being replaced by the regular menstrual flux, through the onset of a day's severe pain and sudden increase of the flow. During the inter-menstrual period there is leucorrhœa. In sum, the patient is weak, wan and miserable.

Now, April 25th, 1864, an examination being made, the index finger passing the hymen with some difficulty, finds the uterus enlarged, especially at the body, which is nearly or quite twice its natural size. Both the body and cervix are very much hardened. The speculum showed leucorrhœa, and the cervix reddened as if from congestion.

The treatment subsequently was chiefly by caustics—nitrate of silver and potassa cum calce. But, on the 16th of May, the third visit, a leech was applied to the cervix, the bite bleeding profusely—more so than I ever knew from the unimpregnated uterus.

On the fifth visit, May 23d, the patient volunteers gratefully to report a marked improvement in all the symptoms. Her friends notice also a decided change for the better in her aspect. The usual five days of misery before the menses set in have been changed to days of comparative comfort.

July 13th, the tenth visit, the report is, that the uterus is in all parts smaller. Where distinctly felt, as at the cervix and a little above, it is softer.

The patient's symptoms improved till Sept. 1st, since when they have been stationary—her present condition being as follows, viz.: January 1st, 1865—The leucorrhœa is much diminished. The five days of distress before the monthly period have been nearly abolished. Flesh and strength have improved, as also the digestive symptoms. The nervous symptoms are better—the sleep generally good. The patient's spirits are much improved, and she feels altogether a different person from what she was before the treatment was begun. Still, she is far from strong, or free from "nervousness." She has not been "made over again." The cachexia is there still.

Locally, the womb is of natural color. The hardening is nearly or quite gone. The hypertrophy of the cervix is pretty much removed; that of the body reduced at least four fifths.

The patient makes special mention of the improvement which followed the leeching in her case.

I would add that she has been unusually free this winter from the affection of the throat to which she has been a prey for years.

The local lesion in this case seems to have been made up of congestion and hypertrophy. The congestion seems to have been pretty much removed, and along with it, to a degree, the symptoms. The hypertrophy has not entirely gone; and I find this lesion exceedingly difficult to disperse, especially when of long standing. I know of no better treatment for it than the making of issues on the cervix with potash, or potash with lime. Some years ago, Dr. Oldham, of London, wrote of having met with success in the treatment of "congestion with hypertrophy," by administering for a long time the bichloride of mercury, but I have never tried this remedy.

This case contrasts with the preceding one in its longer standing before the commencement of treatment; in the greater and more

solid hypertrophy; and in the cachectic state of the system, with which the uterine affection co-existed. Hence, probably, the more decided result in the former than in the latter.

CORK AND ITS USES.

By John R. Jackson.

Amongst the many materials or productions in use in every-day life, cork may certainly take a position in the foremost rank. We all know something of cork; from our earliest childhood we have been familiar with it. It is a substance that has retained all its ancient uses, as well as its importance and value, from its earliest history down to our own day. Unlike most other things, it has not, even in this age of application and invention, found a rival. True it is we have "corky" substances in abundance, produced in almost every country; but neither the productions of nature nor the productions of mechanical skill have produced an efficient substitute for cork, one that could take the place of this valuable bark, or even go side by side with it.

Considering the great quantity of cork that is consumed even in this country alone, as well as the great amount that is wasted, the quantity of bark annually stripped in the cork forests is an operation of no little importance. The slight value many individuals place upon cork, on the whole, does not lead us in the least degree to estimate its real importance, which, in a commercial point of view, is of no trifling nature.

There must needs be a large quantity imported; for amongst wine merchants, bottled-beer merchants, or soda-water makers, a cork is never used a second time; but then what an immense bulk would go to make up a ton of cork, and yet it is by weight that the imports are estimated. There is an immense consumption, and the demand of late years has almost exceeded the supply. The annual quantity imported into this country averages about 5000 tons.

Of the early history of cork, it is very clear that it was well known and in use amongst the Greeks and Romans. Theophrastus distinctly alludes to the fact, now so well known, that the continual barking of the trees tends to improve the quality of the cork. With the Greeks it was called "Phenos," while the Romans knew it by its present specific name of "Suber." Though cork was probably used in very remote times for similar purposes to those of the present day—that of stoppers for bottles amongst the rest—this, however, does not seem to have been its common or general use, inasmuch as we find that vessels of that period were frequently closed by earth, clay, and other similar substances. Stoppers of cork, or "corks," as we now call them, appear not to have been generally introduced till some time in the latter part of the sixteenth century;

from that period, however, its use has been getting more and more universal in all parts of the world.

Before the introduction of cork, or its general adoption for bottle stoppers, various articles were resorted to for this purpose. We are told that apothecaries secured the contents of their vials with stoppers made of wax, which must have been a somewhat tedious process. But even in our own day, a similar custom prevails in many parts of Europe; for with many of the Italians and Neapolitans, for instance, the practice of securing their wine, by pouring oil into the mouth of the bottle before tying it down with skin, is still very prevalent.

Before entering into the uses of cork, however, let us pay a short visit to the forests from which it is obtained, and trace its progress from its natural position to that of its ultimate application.

Cork, as we all know, is the bark of a tree, though commercially miscalled "cork-wood." It is produced by two species of oak, *Quercus suber*, L., and *Quercus occidentalis*, hence called the "cork oaks." These trees grow abundantly in large forests in Spain, Italy, the South of France, and Northern Africa, the latter species being found alone on the Atlantic side. This species is also peculiar, from the fact that it ripens its acorns in the second year.

In general appearance the cork-oaks differ little from the common oak, except, perhaps, that they do not attain to so large a size. There is also a slight difference in the form of their leaves—those of *Quercus suber*, L., being more lanceolate, and the margins not so deeply sinuate; the acorns are also somewhat longer and more tapering in form than those of the common oak.

The cork-oak does not require a rich soil; but, on the contrary, it seems to thrive best in poor and uncultivated ground. To collect the cork, incisions are made longitudinally and transversely in the bark of the living tree, the instrument used being a kind of axe, the handle of which terminates in a wedge-shaped form. After the bark is cut through, it is beaten to loosen it from the liber or inner bark, the wedge-shaped axe-handle being inserted to lift the bark from the trunk. The cork thus removed usually varies from three quarters of an inch to three inches in thickness. The next operation is to divide it into pieces of a uniform or convenient size, and to flatten it, each piece having, of course, a similar curve, corresponding with the trunk of the tree from whence it was taken. For this purpose, the pieces are placed in pits and covered with water, and then pressed flat with heavy stones. The well-known charred surface upon these cork slates is caused by the application of heat at an open fire, after the steeping, for the purpose of contracting the pores. The pieces are afterwards bound up in bales, in which form they appear in the market. In removing the cork from its paternal trunk, care has to be taken not to injure the inner bark next the wood, else it would affect the second crop of bark, and perhaps in-

jure the tree. This operation of stripping the bark, if dexterously and carefully performed, has, as we have already said, no detrimental effect, either upon the growth of the tree or the rapid formation of the new bark; but, on the contrary, the tree is said to grow more hardy and vigorous. The first crop of bark is usually taken when the tree is about twenty-five or thirty years old, but the crop is of less value than that of any succeeding gathering, as it is harder, very uneven, and more full of holes. The second gathering, however, which is in about eight or ten years after the first, is still of an inferior quality. The third crop, collected in about eight years after the second, is usually the first marketable crop—that is, the first crop that is fit for cutting into bottle-corks. When the trees have attained to this age, so that three crops have been taken off, they usually yield a supply of good cork about every seven or eight years; and its quality improves, as well as the quantity enlarging, at each successive gathering. The season chosen for the cork harvest is usually the months of July or August.

It will be seen by the foregoing that the quality, and consequently the commercial value of cork is materially affected by soil, length of time allowed in growing, and also of care in collecting. There is as much difference existing in the quality of cork as in most other articles of daily use. The finest kind should be compact and firm, but at the same time not hard, of an even texture or grain, and of a slightly pinkish tint. This kind of cork is generally selected by wine merchants for bottling-corks; while the coarser kind, which is always more porous, full of small holes, and perhaps punctured by insects, serves for bungs for casks and for the various other applications to which cork is put in a cheap form. When cork is required to be thick, it is usually found coarse, as it must be allowed a longer period of growth to promote its thickness. The charring or singeing process to which this kind of bark is frequently subjected, for the purpose of filling up the pores and making it impervious to fluids, has also a detrimental effect, as it secretes an empyreumatic oil, which is given off and frequently taken up by the liquids it confines; but there is no doubt that care is taken in the selection of these corks, and methods adopted for the prevention of this chemical contamination, as much as possible. This operation of charring, to which all cork was formerly subjected for the purposes we have just mentioned, has been partially succeeded of late by that of boiling the cork and afterwards scraping the surface. This is said to improve rather than deteriorate the cork, in being more effectual in filling up the pores.

The uses of cork are so numerous, and its applications so continually increasing, that the supply of late, as we have said before, has not been sufficient to meet the demand. It is not our intention to enumerate all the uses to which this most useful article is put—indeed, it would be unnecessary to do so, so well known as they are

to all; but there are a few modern uses or applications to which cork has been found suited in recent inventions, and which are, perhaps, among the "things not generally known;" but these uses chiefly consume waste or refuse cork, such cuttings as were formerly considered of no value.

The new elastic floor-cloth, now so well known as "Kamptulicon," is a combination of caoutchouc and cork; and this is but one instance showing that cork, treated with other substances, can be made into a really useful article. Cork-dust has been used successfully with india-rubber in the process of vulcanizing, and to so fine a powder is it reduced for this purpose, that india-rubber so treated is capable of being moulded into the most delicate forms. Another recent application of cork is for stuffing beds, and we believe this is now done to a large extent.

A large cork company, lately established in London, and owning large forests in Portugal, have recently imported the virgin cork into this country, with the impression of its being useful for rustic garden-work. It is brought in very large pieces, and, from its rugged, uneven surface, which is frequently covered with lichens, together with its portability and its porous nature, which makes it capable of retaining moisture, will no doubt cause it to be used for such purposes.

Though the bark of the cork-tree contains a considerable amount of tannin, it is not in general favor among tanners, on account of its not imparting the required "bloom;" and for this reason it is seldom used alone, but is mixed with English oak bark. The inner bark is that which is used for tanning purposes, the outer bark being quite devoid of any of the required properties. The removal of the inner bark causes the death of the tree; and it is chiefly from Sardinia and some parts of Spain, where the trees are very abundant, that it is imported for this purpose. The quantity of tannin, as well as the color of the bark, varies much, according to the district from whence it is obtained. The Sardinian bark is thicker and of a deeper red color than any other.

To return to cork itself and its more common applications, we find that there are two sorts or qualities known in commerce, called respectively white and black cork. The white, which is chiefly produced in the south of France, is the best, as it is smoother, of a more even and finer grain, and freer from holes and knots.

The operation of cork-cutting is one requiring great dexterity and neatness, and is carried on to a great extent both in France and England, though, as might be supposed, the French surpass the English in this art. Machinery has been tried for the purpose of cork-cutting, but all is now cut by hand. Considering the difficulty, with which we are all acquainted, of cutting a clean surface to cork, it is surprising to see the rapidity with which the workman turns out a perfect cork stopper from the square pieces furnished to him. The

knife used for this purpose has necessarily to be very sharp, as well as being very thin; the blade is broad, and when the edge has become dull, it is quickly sharpened on a very fine-grained stone. The bench or tube at which the workman sits has a ledge round it to prevent the corks falling off. On the Continent, a notch is made in the edge of the bench to place the back of the knife in, to prevent it from slipping. Thus the edge is uppermost, and the knife has to be guided slightly while the cork is pressed against the edge, and so dexterously turned and rounded to the required form. All the corks thus cut are thrown into a basket to be sorted, which is usually done by women and boys.

The great importance of cork as a commercial article has been the cause of experiments being tried for its introduction into the Southern States of North America. It is, however, some years since the American government tried this plan of naturalization, for which purpose large quantities of the acorns were imported from the south of Europe. More recently, we learn, from Sir J. W. Hooker's last Report on the Royal Gardens, Kew, that steps are now being taken by the Colonial government of South Australia to introduce the cork-tree, and a number of young plants have been raised at Kew expressly for transmission to that colony.

We sincerely hope that these efforts to establish a tree furnishing so useful a product as cork, in a colony where it would become a valuable addition to its commerce, as well as adding to the supply, which, at the present increasing rate of consumption, is much to be desired, may be crowned with success.—*American Druggists' Circular*, from *The Technologist.*

THE PRESERVATION OF FOOD.

THE superior power and endurance of British laborers over those of other countries is generally admitted. The larger amount of animal food our people consume than do the inhabitants of the Continent is as frankly conceded. John Bull must have his beef and mutton very often, or he becomes desponding and cantankerous. Give him plenty to eat, and he will work for you with as hearty a relish and with as good effects as those associated with his dinner. Starve him, feed him on sauer-kraut, salad, and bread and butter, and he is not worth the salt to his porridge. If Britons are to keep up their reputation for downright hard physical exertion, it becomes a matter of necessity that some method should be adopted by which a sure supply of comparatively cheap animal food may be placed at their disposal. At present we know that the supply is quite incommensurate with the demand, and that a frequent meal of animal food is becoming to a great body of our people every day less and less procurable. Mr. Herbert, in a paper read before the British Asso-

ciation at Bath, last September, observed:—"The rapid increase of the population of Great Britain during the last ten years, and the consequent increase in the consuming powers, added to the extraordinary progress of trade and commerce and the improved monetary position of the great mass of meat-consumers, prove beyond a doubt that the period has now arrived when strenuous efforts are absolutely necessary to meet a demand that must continue to have a most important bearing upon price. At the present time both beef and mutton are selling at full three halfpence per pound above the rate current ten years ago. Prices are still tending upwards, and had it not been for a free importation, nearly all kinds of meat would long ere this have been selling at enormous prices." While in our densely populated towns and districts we can at present scarcely supply sufficient cheap food for the bodily sustenance of our laboring population, who chiefly require animal food, at the same time there exists in other regions of the globe a superabundance of animal food, not only fit for sustenance, but of excellent quality. It is an object, then, worthy of every philanthropist—to say nothing of mercantile interests—to assist in making available the abundance of one part of the earth for the supply of the wants of another part. If our energies of body and mind to be kept going must have proper supplies of aliment, we must seek in other countries for those supplies if our own land will not afford them. The recent correspondence in the public journals connected with the introduction of the South American beef as a means of meeting the deficient supply of fresh food at home, has given an impetus to the very important question—By what means can provisions, when and where in great plenty, be preserved against a season of great dearth or pressing necessity? This question has already occupied attention either as a commercial speculation or as a useful and benevolent object, and many methods for effecting the required ends have been proposed, and several actually practised.

On Wednesday, March 22d, the important subject of "the preservation of food, especially fresh meat, fish, &c., and the best form for import, and provisioning armies, ships, and expeditions," underwent, at the hands of Mr. G. C. Steet, F.R.C.S., a full and interesting exposition before the Society of Arts. The leading features of Mr. Steet's communication were to the effect of classifying the plans already proposed under the following heads:—

First. The means that may well be styled the "ready method," and the plan which has been longest in use, is to prevent decomposition by imbuing the substance to be preserved with some saline matter or preservative agent, whether common salt or compounded brines, and whether the article be simply rubbed, steeped, pickled, or injected according to Payne's, Carson's or Morgan's methods. By the more common plans of "salting," the fluid and more soluble matters contained in flesh are abstracted, and the nutritive qualities of

the latter are considerably injured. "If," says Liebig, "flesh employed as food is again to become flesh in the body, if it is to retain the power of reproducing itself in its original condition, none of the constituents of raw flesh ought to be withdrawn from it during its preparation for food. If its composition be altered in any way, if one of the constituents which belong essentially to its constitution be removed, a corresponding variation must take place in the power of that piece of flesh to reassume in the living body the original form and quality on which its properties in the living organism depend." As Mr. Steet pointedly remarks, "the medical aspect of this subject is full of interest. It is well known that scurvy, debilitation, and fatal disease are brought on by the use of a diet containing but very little potash—a principal base of the salts contained in meat, and which is abstracted largely by the ordinary process of pickling." So full of nutritious matter, indeed, is the brine of meat cured in the ordinary way, that Mr. Whitelaw, of Glasgow, has introduced a process of dialysis for utilizing the fluid in question, by the production from it of a pure fresh extract of meat, procurable at a cheap rate.

The second class of methods is that of *drying*, accomplished by currents of ordinary air either chilled or hot, or by air deprived of moisture by chloride of calcium or by passing over sulphuric acid. In some varieties of this method the meat is afterwards coated over with gelatinous, waxy, or other varnishes.

The third class is that of *cooking* the food to be preserved, either before or after being placed in the vessel containing it. The exact course of procedure followed in effecting the cooking, and the treatment and packing of the food afterwards, vary; but the tin canisters of comestibles which may be seen anywhere, may be taken as samples of this special practice.

A fourth course of conserving meats from decay is that by freezing it and storing it in ice-houses. This method is, however, only practicable under very special circumstances or only in certain climates.

A fifth and last class of processes include those plans which necessitate the total expulsion of all atmospheric oxygen, and at the same time the substitution of a new atmosphere, composed variously of preservative gases, of course to the total exclusion of free oxygen. According to Mr. Steet, here are to be found the more important of all preserving methods. After several schemes and various compositions of gases had been tried, Messrs. Jones and Trevethick introdued a plan of—

"1st, exhausting all, or very nearly all, the air from the chamber in which the meat to be preserved was placed; 2ndly, supplying the place of the air by pure nitrogen gas to nearly the capacity of the canister; and, 3rdly, injecting a small measure of sulphurous acid gas. The *rationale* of this process consisted in getting rid of the oxygen by exhaustion to as great an extent as possible, and neutral-

ing any that might remain either in the case, in the bone, or other tissues of the meat. This is certainly a purely rational system of procedure, and only requires the proof of experience to mark it as excelling most, if not all, others; for it must, I think, recommend itself to all of us in that, if successful, it preserves to our use the meat, &c., in that fresh raw state most suitable for after-cooking in any way that may be deemed most desirable. It gives us also an opportunity of ascertaining the quality of the meat preserved. This none of the cooking processes can well accomplish. You may recollect in the Exhibition of 1862 there were some specimens under the title of 'Azotised raw meat'—of fresh meat, salmon, &c., put up in glass cases; and I can well remember how anxiously I watched them from time to time to see how the samples would bear the severe test of exposure to the heated atmosphere and sometimes the sun's rays in that building. Not one example failed."

Since 1862, however, certain improvements in the preserving matters used, or in their application, have been effected, and which were fully illustrated by Mr. Steet.

In describing these latter improvements, the process might appear tedious as well as somewhat uncertain; but according to the gentleman in question in actual practice it is not so, but is carried out with the greatest facility, and is the one above all others capable of the greatest despatch.

"The cost of the materials is very slight, and the expense of necessary preparation certainly not greater than that of the cooked meat plan, while there is no necessity for furnace, steam heat, or engine. As may be well seen by the beautiful specimen (a head of cauliflower in a glass case) on the table, vegetables may be preserved whole, fresh, and in their natural condition, without the slightest sign of decay, and with all the color and freshness of a recent sample purchased in the market. The specimens of meat, consisting of a section of beef, mutton chop, &c., all under glass shades, give undoubted demonstration that this proceeding is certainly most efficient. The lean is unchanged in color and consistence; the fat is free from change, there is no appearance of rancidity or formation of adipocire; and they look as if just cut from the joint."

We are informed that some such plan of preservation as the above is about to be carried out by a company, which will have factories abroad and wholesale and retail houses at home. It will purchase the cattle, pigs, poultry, fish, game, &c., at first hand, then slaughter and dress the meat, and after preserving the finer pieces by the raw meat process, will put up the remainder by the cooking method. This will ensure all portions used not only to be fresh and free from taint, but to be obtained from healthy animals, therefore more fit for human food and calculated to convey into the system the largest relative amount of nutritive material.—*London Lancet.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, AUGUST 10, 1865.

TRIAL OF DR. PRITCHARD.—The recent trial of this surgeon, in Edinburgh, for the murder of his wife and Mrs. Taylor, his mother-in-law, by poison, which resulted in his conviction and subsequent execution, brought out several points of unusual interest, one of which has been the occasion of much comment by the public press. Dr. Pritchard had been for several years connected with the British Navy, from which he had received an honorable discharge, and had only recently entered upon civil practice at Glasgow. His wife's illness began in October, and continued until March, when she died, and her husband represented to the registrar that the cause of death was gastric fever. While she was sick a Dr. Paterson was called by him in consultation, who suspected antimony to be the cause of the symptoms, and prescribed accordingly. His suspicion of poisoning was so strong that he consulted with other physicians in Glasgow, who agreed with him that further interference in the case would be improper. After the death of Mrs. Taylor, which took place in February, he refused to certify to its cause in the following letter to the registrar, and it was this letter which led to the subsequent legal investigations :—

"Dear Sir,—I am surprised that I am called on to certify *the cause of death* in this case. I only saw the person for a few minutes, and a very short period before her death. She seemed to be under some narcotic; but Dr. Pritchard, who was present from the first moment of the illness till death occurred, and which had been in his own house, may certify the cause. The death was certainly sudden, unexpected, and to me mysterious."

The reasons assigned by Dr. Paterson for his conduct in this case will be found in his testimony before the court, which follows :—

"In cross-examination, witness stated that it was his impression on seeing Mrs. Pritchard that she was poisoned, or being poisoned, with antimony. He did not go back to see her, because she was not his patient. He had nothing to do with her. It was not his duty to do so.

"You saw a person being poisoned with antimony, and you did not think it was your duty to interfere? I did the best I could to prevent her being further injured, by apprising the registrar of the fact.

"Did you tell Dr. Pritchard? I did not.

"You were surely under an obligation to go back again when you saw a person being poisoned by antimony? I took what steps I could to prevent any further administration of the drug. I refused to certify the death of Mrs. Taylor, and if there had been a *post-mortem* examination of Mrs. Taylor's body I believe that the drugging with antimony would have gone no further at that time. I observed that she was suffering under the same symptoms as those formerly observed when I was called in on the 2d of March. I still believed her to be suffering under antimony, and prescribed for her accordingly. I saw her alone, but did not mention antimony to her in the slightest. The

treatment I prescribed for her, provided she got nothing else, was quite sufficient to have brought her very soon round, taking it for granted that my prescriptions were carefully walked up to, or rather my advice. It was Dr. Pritchard who asked me to visit his wife on the occasion. I did not mention to him what I thought. It would not have been a very safe matter to have done so. I did not go back, because it was none of my business. I did not consider it my duty. She had her husband, who was a medical man. I had discharged my duty.

"By prescribing certain things, and not going to see that your prescription was followed? In the case of a consultation the consultant has no right to go back.

"The dignity of your profession, then, prevented you? The etiquette of the profession."

The action of Dr. Paterson in this matter, as may be supposed, has been the subject of much severe criticism in and outside of the profession, as well as of much unjust remark on the part of the public press. It certainly is unaccountable when judged by his own testimony, and perfectly unjustifiable by any rules of professional etiquette or decorum. If he suspected Dr. Pritchard to be the guilty party, the treatment which he advised as quite "sufficient to bring her round" was, as he well knew, the merest farce, for it would never be followed; if he did not suspect him, then there was every reason why he should have mentioned to him what he thought. It is true that it was not his business, and might not have been a safe matter to accuse Dr. Pritchard at the visit of attempting to murder his wife, but it certainly was his duty to state his belief without reference to persons, if he was so strongly convinced of its correctness, as he says he was. This is the error for which Dr. Paterson should be held accountable. The English papers, however, have put a different construction upon his conduct, which they attribute to a desire to screen a member of the profession from suspicion, "lest undue discredit should be brought upon the faculty;" conduct which, the *Times* remarks, "is not so wholly unlike what is done every day by respectable medical men as we could desire."

The scientific evidence in this case, which we extract from the *Chemist and Druggist*, will be found of unusual interest. The criminal administration of antimony, of which there can be no doubt, although the immediate cause of death in both instances will always remain a matter of uncertainty, is rare in the records of medical jurisprudence. Of 230 cases of poisoning tabulated by Briand and Chaudé, this substance was employed but twice.

"Dr. Douglas Maclagan, the learned Professor of Medical Jurisprudence at the University of Edinburgh, and Dr. Littlejohn, made a *post-mortem* examination of the body of Mrs. Pritchard, and reported that it presented no appearance of morbid action capable of accounting for death. Subsequently Dr. Maclagan, with the assistance of Dr. Littlejohn and Dr. Arthur Gamgee, made a chemical examination of the body, and obtained unmistakable evidence of the presence of antimony in the contents of the intestines, in the bile of the gall-bladder, in the blood, and in the liver. He also detected the poison in the deceased's urine, and in some stains on her linen. The processes of

Reinsch and Marsh were employed to ascertain the presence of antimony, and in some cases quantitative determinations were made by weighing the sulphide precipitated by sulphuretted hydrogen. The amount of sulphide obtained from seven ounces of urine corresponded to nearly one fourth of a grain of tartar emetic; that from four drachms of the bile, to more than one tenth of a grain; and that from a portion of the liver weighing less than four ounces, to one quarter of a grain of tartar emetic. The fact that the antimonial compound found in the intestines was soluble in water convinced Dr. Maclagan that it was the tartrate of antimony and potash, that is, tartar emetic, as the only other commercial preparation of antimony soluble in water is the chloride, a dark-brown, corrosive fluid, totally unsuited for internal administration. The results of the chemical investigation led Dr. Maclagan to the following conclusions :—

"'1. That Mrs. Pritchard had taken a large quantity of antimony in the form of tartar emetic.

"'2. That, having regard to the absence in her case of any morbid appearances sufficient to account for death, and to the presence in it of a large quantity of a substance known to be capable of destroying life, her death must be ascribed to the action of antimony.

"'3. That it is most unlikely that this poison was taken in a single large dose. Had this been the case, I should have expected to have found some more decided evidence of irritant action in the mouth, throat, or alimentary canal.

"'4. That, from the extent to which the whole organs and fluids of the body were impregnated with it, it must have been taken in repeated doses, the aggregate of which must have amounted to a large quantity.

"'4. That, from the large amount found in the liver, from its ready detection in the blood, and from its being found passing so copiously out of the body by the bile and urine, it is probable that some of the poison had been taken at no greater interval than a period of a few days previous to death.

"'6. That I am inclined to believe that it had not been administered, at all events in any great quantity, within a few hours of her death. Had this been the case, I would have expected to have found at least some traces of it in the contents of the stomach, and more in the contents of the intestines; whereas none was found in the former, and the amount found in the latter seems to be amply accounted for by the bile impregnated with the poison discharged into them from the liver.

"'7. That the period over which the administration had been extended cannot be determined by mere chemical investigation, but must be deduced from the history of the case, with which I am unacquainted.'

"Professor Penny, of Glasgow, made an independent examination of portions of Mrs. Pritchard's body, and discovered antimony in the contents of the intestines, in the liver, kidney, spleen, stomach, rectum, brain and blood. He also detected mercury in the spleen, heart, blood and kidney. He obtained no evidence of the presence of any other metallic poison, or of any organic poison.

"The scientific evidence respecting the poisoning of Mrs. Taylor was equally conclusive. Mrs. Taylor, who came to Glasgow to nurse

her sick daughter, died on February 25. Dr. Paterson was called in shortly before her death, and was informed by Dr. Pritchard that she had been suddenly taken ill while in the act of writing a letter. From the contraction of the pupils, and other symptoms exhibited by the dying lady, Dr. Paterson concluded that she was under the influence of opium or some other powerful narcotic. He declared his opinion to Pritchard, who thereupon stated that the old lady was in the habit of regularly using Battley's sedative solution; that she had a few days before purchased not less than a half-pound bottle of the medicine; and that he had no doubt but it was very likely that she might have taken a good 'swig' of it.

"Dr. Paterson refused to certify the cause of death, and wrote to the registrar, informing him that he considered the case mysterious. Pritchard then sent a certificate to the registrar, attributing the death of his mother-in-law to apoplexy.

"Dr. Maclagan made a most careful examination of the old lady's body, and submitted the principal organs to chemical analysis. The conclusions arrived at by him were :—

"'1. That Mrs. Taylor had taken a considerable quantity of antimony in the form of tartar emetic.

"'2. That, having regard to the absence of any morbid appearances sufficient to account for death, and to the presence in the body of a considerable quantity of a substance known to be capable of destroying life, her death must be ascribed to the action of antimony.

"'3. That it is most likely that this was not taken in a single large dose. Had this been the case, I should have expected to have found some morbid appearances indicative of the irritant nature of the drug. It appears to me more probable, from the amount found in the body, that it must have been taken in a succession of doses, not great enough individually to produce local irritant effects, but amounting in the aggregate to a large quantity. It is right, however, to add that a single copious dose, not large enough to produce marked local effects, might give rise to fatal depression of the system in a woman aged 71, whose heart was enlarged and somewhat dilated.

"'4. That, from the fact that antimony was found copiously in the liver, was readily detected in the blood, and existed to the amount of a quarter of a grain in the stomach, some at least of the tartar emetic had been taken probably within a few hours before death.

"'5. That, from mere chemical investigations, I am unable to say over what length of time the administration of the antimony had extended, supposing it, as I believe, to have been taken in a succession of doses. This can be learned only from a consideration of the history of the case, with which I am unacquainted.'

"Here, again, Prof. Penny's experiments upon portions of the body completely confirmed those of Dr. Maclagan.

"Several articles taken from the prisoner's house were submitted to analysis by Prof. Penny. In a paper package containing 2,850 grains of tapioca the presence of antimony, in the form of tartar emetic, was unequivocally detected. Its amount was found to be equal to 4·62 grains in the pound of tapioca. Not a trace of mercury was detected. A bottle containing one ounce and five drachms of a dark-brown liquid, having the odor and general appearance of Battley's solution of opium, was found to contain an appreciable quantity

of antimony in a soluble form. The amount was equal to 1-5 grain per fluid ounce of liquid. It contained no mercury.

"The other articles which might be supposed to bear upon the case were:—A mixture of tartarized antimony and arsenious acid, in equal proportions by weight; two separate portions of tartarized antimony; a lump of opium; and small quantities of calomel, of aqueous solution of corrosive sublimate, and of the tinctures of aconite, conium and digitalis. Some cheese and a second package of tapioca were tested for antimony and mercury, but no evidence of the presence of these metals was obtained.

"Prof. Penny's evidence respecting the contents of the bottle found in Mrs. Taylor's pocket after death was most important. Suspecting the presence of some other poison besides antimony in the Battley's solution, he instituted further experiments, and succeeded in obtaining tolerably clear evidence of the presence of aconite. He detected the latter poison by applying an extract, obtained by evaporation, to his tongue, when it produced the tickling and benumbing sensation characteristic of aconite. A further portion was treated with ammonia and diluted hydrochloric acid, on the evaporation of which it produced the same sensations strongly and distinctly. He had added ten per cent. of Fleming's tincture of aconite to Battley's solution, which produced the same sensations very much stronger. He concluded that the solution given to him for examination contained more than five and less than ten per cent. of tincture of aconite. Witness then described a series of experiments made by him on rabbits with Battley's solution, as purchased by him in various places in Glasgow and London, with the solution with tincture of aconite added by himself, and with the mixture under consideration. The various preparations had been injected under the skin of the back of the rabbits, between the skin and muscles. With the genuine Battley the rabbits assumed a prone position, resting on belly and chest, and the head resting on the ground. The fore-legs were either sprawling or gathered under the body, the hind legs being extended sideways; the eyes remained open, and the pupils were natural and not contracted. The breathing was invariably gentle; no cries were uttered; no convulsions or spasms of the body were apparent. There was a complete condition of inanity; and, with the exception of the open state of the eyes, the animals seemed to be in a state of perfect sleep. In this state the animals remained for several hours, and then gradually recovered. The effects produced upon the animals by Battley's solution containing aconite presented a striking contrast to the symptoms resulting from pure Battley. Soon after the injection the animal became restless and uneasy, and then began to crouch, resting on its flank, the hind legs extended laterally, and keeping its head erect. It next assumed the sitting posture, in an attitude of watchful expectancy, and commenced to twitch its lips and move its jaws, as if chewing. Suddenly it staggered and reeled over, quickly regaining its feet; saliva began to flow from the mouth, and soon after piteous and peculiar choking cries were emitted. The head was retracted, and the breathing was painfully laborious. Convulsions now set in, followed by intervals during which the limbs were quite relaxed; and the animal lay helpless on its side. Frantic leaps were now taken. A state of utter prostration then occurred, variable in duration; and then a strong

convulsion came on, during which, or immediately after, the animal expired, the limbs becoming instantly relaxed. The results produced by this bottle corresponded in every respect with the effects produced by the above mixture, and were so closely similar that it was impossible to detect any essential difference between them. In the case of the small rabbits, the experiments were made at the same time; and without knowing beforehand, it would not have been possible to distinguish the animal under the influence of this Battley from the one under the influence of the mixture of Battley and the aconite. These results left no doubt in his mind, joined with the sensations, that that bottle contained aconite. All the other experiments, which were numerous and varied, confirmed these results.

"After hearing Prof. Penny's evidence, the Court recalled Dr. Maclagan, who stated that, although he had attributed Mrs. Taylor's death to the effects of antimony, he was inclined to think that her last symptoms might have been produced by aconite. The falling head, the almost imperceptible breathing and pulsation, and the torpid condition of the brain, were indications such as would have resulted from aconite; but aconite, like most poisons, varied a little in the effects it produced on different individuals. Still, these were symptoms likely to have been produced by aconite. Antimony passed pretty rapidly out of the system by vomiting and purging, weakening and ultimately destroying the patient. Opium might lessen the tendency to vomit, but a pernicious effect on the muscular tissue would remain. He had never known a patient under the influence of aconite and antimony at the same time; but if opium, aconite and antimony were administered so as to be operating at the same time, the symptoms which Mrs. Taylor had exhibited were such as he would have anticipated, because aconite, being the most powerful, would predominate. There was nothing in her symptoms to indicate apoplexy.

"The evidence of the chemists who supplied Pritchard with his drugs, cannot fail to be interesting to the readers of this journal.

"John Campbell, manager of the Glasgow Apothecaries' Company's branch in Sauchiehall Street, said the prisoner had a running account with that establishment, and read entries proving the purchase by him of several quantities of tincture of aconite, tartarized antimony and other poisons. On three occasions he had obtained one ounce of tincture of aconite, and on two occasions one ounce of tartar emetic. Witness deposed that one ounce of tartarized antimony was an unusual quantity to sell. Two grains was the ordinary dose for an emetic, and the ounce contained 435½ grains. He had never sold an ounce of tartarized antimony to any other medical man in Glasgow, and the quantity purchased by the prisoner struck him. Two ounces would serve their business for twelve months, and they had a very large dispensing business. The quantity of aconite purchased was also unusual, and one or two ounces of it would cover all they sold of it in a twelvemonth. The prisoner had also purchased a very large quantity of chloroform—132 ounces between July and December, which exceeded all their sale to other persons. Witness had been a dispensing apothecary for twenty-three years, and had never sold so much poison to any medical man. Indentified several vials produced.

"In addressing the jury for the prisoner, Mr. A. R. Clark combatted the arguments by which the Crown counsel had endeavored to

prove that a medical man had been the murderer. The learned counsel concluded his address with a pathetic appeal for a verdict of acquittal. This appeal, as our readers are aware, did not counteract the effect of the evidence brought forward by the counsel for the Crown, and the jury returned a unanimous verdict of *guilty* on both charges. The Lord Justice Clerk sentenced the prisoner to be executed at Glasgow on the 28th of July."

Dr. Phineas J. Horwitz, of Pennsylvania, has received the appointment of Chief of the Bureau of Medicine and Surgery in the Navy, *vice* Dr. William Wheelan, deceased. Dr. Horwitz has long been connected with the Navy, and has been a popular and efficient officer in the service.—*Med. and Surg. Reporter.*

It is stated in the report of Dr. R. M. Girvin, that during last year there were treated in the Blockley (Philadelphia) Hospital 5815 cases; 3455 of which were cured and 532 died, and 555 remained in the wards. A large number of patients have also been prescribed for in the out-wards. Five hundred and twenty-eight cases were treated in the female venereal wards.—*Med. News.*

At the annual commencement of the Long Island College Hospital Medical School, held in Brooklyn on the 29th of June, the degree of M.D. was conferred on 52 candidates.

Dr. John B. Biddle has been elected Professor of Materia Medica and General Therapeutics in the Jefferson Medical School.

The entire value of the estate of the late Dr. Valentine Mott is stated to be $400,000. His anatomical museum goes by his will to the New York Medical College.

The twenty-sixth annual circular and catalogue of the Baltimore College of Dental Surgery for session 1865–66 has been issued. This is the oldest dental college in the world. Notwithstanding the unfavorable circumstances with which it has been surrounded for the last four years, it is in active operation, exercising great influence for good upon the profession.—*Dental Register of the West.*

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, August 5th, 1865.

DEATHS.

	Males.	*Females.*	*Total*
Deaths during the week - - - - - - -	65	62	127
Ave. mortality of corresponding weeks for ten years, 1853—1863,	56.4	54.3	110.7
Average corrected to increased population - - - - -	00	00	120.64
Death of persons above 90 - - - - - - - -	0	1	1

Deaths in Boston for the week ending Saturday noon, Aug. 5th, 127. Males, 65—Females, 62. Accident, 4—apoplexy, 1—inflammation of the bowels, 2—congestion of the brain, 1—disease of the brain, 2—bronchitis, 2—cancer, 2—cholera, 2—cholera infantum, 15—cholera morbus, 1—consumption, 19—convulsions, 5—cyanosis, 2—debility, 1—diarrhœa, 7—dropsy, 2—dropsy of the brain, 2—dysentery, 15—erysipelas, 1—typhoid fever, 2—gangrene, 1—disease of the heart, 2—infantile disease, 2—jaundice, 1—disease of the kidneys, 1—congestion of the lungs, 1—inflammation of the lungs, 5—marasmus, 1—measles, 1—neglect, 1—old age, 2—premature birth, 2—puerperal disease, 1—scrofula, 1—sunstroke, 3—teething, 2—tetanus, 1—unknown, 9—whooping cough, 2.

Under 5 years of age, 56—between 5 and 20 years, 10—between 20 and 40 years, 28—between 40 and 60 years, 24—above 60 years, 9. Born in the United States, 78—Ireland, 41—other places, 8.

THE

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ON THE NAUSEA AND VOMITING OF PREGNANCY.

[Read before the Boston Society for Medical Observation, and communicated for the Boston Medical and Surgical Journal.]

BY FRANCIS MINOT, M.D.

THE sympathy between the impregnated uterus and the stomach is well known. Among the earliest and most familiar signs of pregnancy are nausea and vomiting, which, from their chiefly occurring early in the day, are known among women as the "morning sickness." The matters ejected consist chiefly of a glairy mucus, or a sour, watery fluid. If food have been taken, this also is vomited. The symptom may occur immediately after conception, and it may continue throughout the whole period of utero-gestation; but it commonly appears about the fourth week, and ceases about the sixteenth or twentieth week. Ramsbotham considers nausea an indication of a normal condition in pregnancy, and thinks its absence betokens some dangerous or unfavorable condition; but other high authorities (Montgomery, Tanner) are of a different opinion. Dr. Gunning S. Bedford (*Clinical Lectures on the Diseases of Women and Children*, New York, 1856, p. 556) also believes that women who are not usually sick during pregnancy are very liable to miscarriage, and he is in the habit of prescribing ipecacuanha to such patients, with, he alleges, favorable results. I am acquainted with a few women who never experience nausea or vomiting in their pregnancies, but who are yet in perfect health, and have borne healthy children; and my observation would lead me to believe that women who experience nausea and vomiting are quite as likely to abort as those who are free from that symptom.

Nausea and vomiting may not only persist beyond the normal period, but by their obstinacy and violence are sometimes productive of the most serious consequences, threatening and even causing death, from exhaustion and inanition, of which an interesting example occurred in the person of the gifted Charlotte Brontë. How far this excessive sympathy is due to an abnormal condition of the uterus becomes an interesting subject for inquiry. Dr. James Henry

Bennet, whose writings have done so much of late to waken an interest in the subject of uterine disease, believes that obstinate vomiting during pregnancy is mainly caused by disease of the cervix uteri. In the third edition of his *Practical Treatise on Inflammation of the Uterus, &c.*, London, 1853, he thus expresses himself on this subject:—"When the cervix has been brought fully into view, it will be found tumid, congested, of a livid hue, voluminous, soft and only partially indurated; and on one or both lips, generally penetrating into the cavity of the os, is seen a more or less extensive ulceration, sometimes covered with large, fungous granulations." "Its fungosity [i. e., of the ulceration] is sometimes so great that it might occasion, in the minds of persons unacquainted with the above facts, the impression that the patient is affected with malignant ulceration of the organ. I have generally found ulceration of the cervix in pregnant women begin to assume this fungous character about the end of the third or fourth month of pregnancy."—(P. 160.) "One of the commonest and most distressing symptoms is an extensive aggravation of the sickness which is naturally present during the first months of pregnancy. The existence of inflammatory ulceration of the cervix, will, indeed, I firmly believe, be found to be the key to those cases of obstinate sickness which occasionally defy all medicinal aid, reduce the patient to the brink of the grave, and sometimes even render it necessary to bring on abortion in order to save the life of the mother. At least I have found such to be the case in nearly every instance of the kind in which I have been consulted, for many years since my attention has been directed to the subject."—(P. 163.)

Now it is remarkable that Dr. Bennet does not report a single case in support of this opinion, although he cites several of abortion caused by disease of the cervix. It would at least be interesting to know *how many* instances of the kind he has met with. If "luxuriant fungosity of the ulcerated surface" be exceedingly common during pregnancy, and if "one of its commonest and most distressing symptoms is an extreme aggravation of the sickness" of pregnancy, this effect ought also to be common, whereas we know it to be rare. Hence the disease of the cervix does not necessarily induce these symptoms, and there are good reasons for believing that some of the worst cases of vomiting during pregnancy may occur with a perfectly normal state of the cervix.

Dr. Clay, of Manchester, Eng., an eminent authority, has published a treatise on this subject, which I have not seen, but which is quoted by Dr. Tanner (*Signs and Diseases of Pregnancy*, London, 1860, page 386). He thinks that excessive nausea and vomiting during pregnancy is often due to "congestive inflammation and great tenderness of the os and cervix uteri." A case reported to the Boston Society for Medical Improvement, by Dr. S. D. Townsend, perhaps tends to support this view. A lady, 35 years old, had a

succession of abscesses which opened into the vagina, and were finally attended by vomiting, which was obstinate and excessive. "At last it was accidentally discovered that this symptom could be instantly controlled by raising the cervix uteri with the finger, the vomiting returning as soon as the organ was allowed to return to its natural position. The insertion of a piece of sponge into the vagina had the same effect."—(*Transactions of the Boston Society for Medical Improvement*, Vol. IV., p. 256.) No doubt the cervix was in an irritable and tender condition, which was aggravated by pressure against the sacrum to such an extent that the stomach manifested its sympathy by vomiting.

Dr. Miller, of Dorchester, has published an interesting paper on this subject in the *Boston Medical and Surgical Journal* (Vol. LXI., p. 69). He thinks the excess of this symptom is often, perhaps generally, caused by a congested or inflamed condition of the cervix, and he reports five cases in which the application of a strong ethereal tincture of iodine to the cervix and upper part of the vagina was followed by relief. In most of these cases the relief followed so quickly the application of the remedy that there seems to be no doubt that the former was the effect of the latter.

We thus see that excessive nausea and vomiting are sometimes apparently occasioned by a condition of the os or cervix uteri which may be relieved by the application of some strong stimulant or irritant, like tincture of iodine or nitrate of silver; but what is interesting in this connection is, (1) that there is no one condition of the cervix or os which is chiefly capable of producing the symptom in question. Dr. Bennet ascribes the vomiting to *ulceration*, Dr. Clay to *congestive inflammation*, and Dr. Miller to *congestion* of the cervix, and in one instance to *inflammation*, *hypertrophy* and *congestion*; and he afterwards remarks, "in all there was well-defined inflammation of the cervix, though not all equally marked." Like many others, he falls into the error of confounding congestion with inflammation. (2.) Another interesting fact is, that neither congestion, inflammation nor ulceration of the cervix or os uteri are liable to cause nausea and vomiting in the non-pregnant state, and this throws some doubt as to the true pathology of the affection. Because certain applications to the cervix are sometimes followed by relief, it does not follow that the cervix was inflamed, or that, if inflamed, it was the cure of this latter condition which caused the cessation of vomiting. A dark-red color is the normal one for the pregnant uterus, and if that be the cause of excessive nausea and vomiting, this symptom would be constant instead of rare. The cervix of the unimpregnated uterus may be entirely destroyed by cancerous ulceration without causing vomiting. If inflammation, ulceration, or even congestion be the source of the mischief, how does it happen that the vomiting will sometimes instantly cease, with-

out any remedy having been addressed to the uterus?—as in the following case:—

Case I.—Mrs. W., aged about 25 years, was the mother of two children, the youngest about two years old. She had never suffered from unusual nausea and vomiting in former pregnancies. She was debilitated from over-lactation with the youngest child, suffering from neuralgia and giddiness. She became pregnant a third time early in July, 1855, and immediately began to complain of nausea and vomiting, which increased until I was consulted, Oct. 22d. At that time she vomited apparently everything taken, on some days, while on others she suffered less from this symptom. She was ordered to keep the horizontal position, to apply chloroform to the epigastrium, to take effervescing draughts, to have her breakfast in bed, removing to the sofa an hour afterwards, &c. Under this treatment there was no vomiting for thirty-six hours, but the symptom returned with violence on the 26th. The patient tried almost all the remedies which are usually employed in these cases, with varying success; sometimes she would be free from vomiting for twenty-four hours, but there was no real improvement, and she became much emaciated and greatly debilitated. No treatment was addressed to the uterus directly, but on the 7th of November four leeches were applied to the epigastrium, against the remonstrances of the friends, who thought that the patient was already debilitated enough. Entire relief followed this experiment, and there was never any vomiting of consequence afterwards. Mrs. W. slowly recovered her strength, and was confined without accident, April 17th, 1856. The child, a boy, weighed 9 pounds. In this case no examination of the uterus was made, but if it were inflamed or congested or ulcerated, either those conditions could not have interfered with the sudden cessation of the vomiting on the 7th of November, or else they must have ceased to exist in an equally sudden manner. The following case is of a similar character.

Case II.—Mrs. S., about 26 years old, the mother of one child, became pregnant early in April, 1863. She was then not in very good health, and suffered from cough, pain in the left side, and severe facial neuralgia. In June, she began to have nausea, which increased until July 10, when the vomiting became uncontrollable, and continued so for about six days, when it was arrested, apparently by the application of morphia to a blistered surface on the epigastrium. From this time Mrs. S. did well, gained flesh, and was confined without accident, Feb. 6th, 1864. In this case, also, the suddenness of the recovery precludes the idea of organic disease of the cervix being the cause of the nausea and vomiting.

Displacement of the uterus seems sometimes to be the cause of excessive nausea and vomiting during pregnancy, although, so far as I know, these symptoms do not commonly attend that state of the

unimpregnated womb. An abstract of a case of this kind, reported by Dr. Brian to the French Academy of Medicine, may be found in Vol. LV. of the *Boston Medical and Surgical Journal*, p. 292. The case seemed approaching a fatal termination, all remedies which could be thought of having been tried in vain, when a vaginal examination was made, which showed that the uterus was completely retroverted, and incarcerated in the hollow of the sacrum. It was disengaged from this situation and placed in its normal position. Immediate relief followed, and the vomiting ceased, to return no more. The case before alluded to, reported by Dr. Townsend, may, perhaps, be referred to this head.

Case III.—Mrs. C., about 20 years old, tall, slender, who had always been delicate, began to have nausea about the end of December, 1863, being then six or eight weeks advanced in her first pregnancy. The symptom increased, and was soon accompanied by vomiting, for which all the usual remedies were tried:—mustard and chloroform externally; chloroform, lime-water, creosote, prussic acid, oxalate of cerium, ice, soda and checkerberry, bismuth, internally, gave no relief. Morphia applied to a blistered surface afforded some benefit, and this was employed twice daily, the amount used being increased from half a grain to a grain and a half, the patient keeping her bed all the time, a period of about four weeks, during which she vomited several times daily, and apparently retained very little food. Feb. 8th, four leeches were applied to the epigastrium, but without relief.

Feb. 9th, an examination was made, and the cervix was found to be prolapsed almost to the external orifice. By the speculum, it was seen to be dark-colored, but otherwise normal in appearance. It was long, and soft to the feel. A strong ethereal tincture of iodine was painted freely over the cervix. No relief followed this application, and the next day a ring pessary was applied to raise the uterus. This was followed by considerable improvement, although the patient still vomited at intervals. Feb. 14th, on examination, the cervix is found very low, and directed towards the pubes, soft, not tender, and easily raised by the finger to its normal position. The speculum showed the os to be small, closed, the exterior of the cervix healthy in appearance, and not very dark in color. It was freely painted with the iodine, which caused some smarting. The ring was removed, and a sponge was substituted, so as to keep the uterus in a normal position. The sponge was removed and cleansed daily. Much relief followed this treatment, and on the 16th the patient removed to a new house, walking up two long flights of stairs with ease. On examination by a good light, the cervix looked perfectly healthy, except a slight abrasion on one side of the os, a few lines in extent. The color was a shade darker than in the virgin state, but it was still pink, and not red. The iodine was again freely applied, and an inflated india-rubber pessary was sub-

stituted for the sponge. From this time Mrs. C. was relieved of excessive vomiting, although she was still occasionally troubled by it in the morning. She walked out, and was able to retain her food. She remained somewhat debilitated, and early in March was much annoyed by a succession of boils on the abdomen. The pessary was worn until March 21st, when the uterus had risen so high in the pelvis as to require no support. Mrs. C. was well after this time, and was confined Aug. 4th, forceps being used, on account of inefficient pains. She recovered perfectly, but was unable to nurse her child, having no nipples. The child was a boy, of large size, and is thriving on a wet nurse.

While this patient was under treatment I felt quite sure that the excessive vomiting was owing to the prolapsed condition of the uterus, and that the relief was due to the employment of the pessary. The patient thought so too; and I have no doubt that this opinion was to some extent true. It will be noticed, however, that the improvement was not instantaneous, but gradual, and that the vomiting did not cease before March 8th, or seventeen weeks after the beginning of pregnancy; and the subsequent history of Mrs. C. will show that there was something more than mere uterine displacement which caused her so much discomfort.

Jan. 2d, 1865, Mrs. C. sent for me, saying that she had been troubled with nausea for several days, and as she had had no catamenia since the last of November, she feared that she was again pregnant. She had vomited bile in the morning. On examination, the uterus being found very low, as before, a ring pessary was introduced.

Jan. 4th.—Vomiting increased. Patient anxious and desponding. The ring was removed, and a "concave" pessary, of vulcanized india-rubber, was substituted.

10th.—No relief followed the introduction of the pessary. As it was turned somewhat edgewise, a larger one was yesterday introduced in place of it. The patient is tolerably comfortable in the evening, but during the day she is constantly nauseated, and vomits apparently everything taken, besides much bile.

11th.—As Mrs. C. was no better, the concave disk was removed, and a large ring substituted. The uterus was very low, the os rather patulous and rough within. Solid nitrate of silver was applied.

13th.—No improvement. Patient vomits continually. Os uteri patulous. By the speculum it is seen to be open and granular on the inside. Nitrate of silver was applied to the inside of the cervix, and strong ethereal tincture of iodine (one drachm to the ounce) was painted over the outside freely, and a soft inflated india-rubber pessary was introduced.

14th.—No relief.

15th.—Decidedly better.

16th.—Worse again. She vomited fourteen times to-day, apparently retaining nothing on the stomach.

Mrs. C.'s friends were very anxious that she should make a visit to New York, and as I had some doubt as to the propriety of the step, in view of her debilitated condition, Dr. Putnam was asked to meet me, Jan. 17th, in consultation on the case. He recommended one drachm of the tincture of calumbo, with an equal amount of water, once in three hours, the use of an abdominal supporter, and that the patient should go to New York. The calumbo was given at once, and the patient seemed improved by it. The next day she was also better, and she continued to mend from that time. On the 18th, Mrs. C. drove out, and on the 21st she went to New York, where she arrived without great fatigue. Since that time she has been free from trouble.* The abdominal supporter was used at intervals, and, at the suggestion of Dr. Putnam, Hodge's "closed-lever" pessary was introduced, to raise the fundus of the uterus, which tended to fall backwards, producing a partial retroflexion.

In this instance the sickness lasted only about twenty days, and if its cessation were owing to any of the measures employed, it did not seem to be due to local treatment.

Before concluding this paper, already, I fear, too long, I will cite one other case, in which excessive nausea and vomiting were aggravated by salivation.

Case IV.—Mrs. M., aged 26 years, wife of a coachman, has been married about four years. She had one miscarriage at the fourth month, and one year ago was delivered of a dead child at term, after a labor lasting three days. Has never suffered before from excessive nausea and vomiting. Now, Jan. 10th, 1865, is about eight weeks pregnant. For about ten days has had constant nausea and vomiting, with extreme salivation. Throws up almost everything taken, and is confined to the bed by the prostration. Uterus very low, movable, and healthy to the touch.

I will not quote the daily record of the case, but simply say that the vomiting and salivation persisted for about fourteen days, when the former ceased, and the patient was able to be about house and even to go out; she was gaining strength and health. The salivation continued, though more moderate, when last seen, Jan. 24th. As I have not heard from her since, I presume she is doing well. The remedies chiefly employed in this case were external irritation and the internal use of extract of belladonna. No local treatment was employed; and I cannot help thinking that if it *had* been, the result would have been considered as a remarkably successful one. So difficult is it to estimate the value of remedies!

As to the treatment of these cases, it would be proper, whenever the symptom does not yield to appropriate regimen and internal remedies, to ascertain the condition of the uterus. If anything ab-

* This patient was confined, without accident, Aug. 8th. The child, a girl, weighed nine pounds. During the pregnancy, Mrs. C. succeeded in drawing out the nipples, and is now nursing her baby.

normal be discovered, either in its condition or in its situation, an appropriate local treatment should at once be instituted. In a certain number of cases this will be speedily and permanently successful; but in other, and, as I am persuaded, not a few instances, it will fail. It is to be hoped that by means of carefully recorded observations we shall know ere long how far the symptom in question be dependent on a local cause, capable of removal. What is remarkable is, that in some cases in which there seems to be no lesion of the uterus, the application of a strong irritant to the cervix and the neighboring parts of the vagina is followed by relief, apparently on the principle of revulsion, or counter-irritation, just as the same effect is produced by the application of a sinapism to the epigastrium.

On comparing the cases reported above with each other, we notice one thing which is common to them all—the patients were not in good health at the time they became pregnant. They were either originally delicate, or they had become enfeebled by excessive lactation, abortions, or other debilitating influences. How far this state of things would prove to be true in a larger number of instances I cannot say, but the subject is worth investigating. Should further observations show this to be a common condition in the excessive vomiting of pregnancy, we may, in some cases, anticipate the evil, and prevent it by recommending a good diet and tonic medicine, and by enjoining the patient to avoid, as far as possible, everything likely to lower the general health.

REPORT OF THE COMMITTEE ON THE "PROGRESS OF OPHTHALMOLOGY IN THE YEAR 1864," TO THE AMERICAN OPHTHALMOLOGICAL SOCIETY.

By B. Joy Jeffries, M.D.

[Read before the American Ophthalmological Society, June 13th, 1865.]

Your committee has not considered it within its province to enumerate or criticize all that has been said or written upon ophthalmology during the past year, but simply to bring before you what seems truly in advance of our former knowledge, and show its importance in our branch of medical science, and its bearing upon the study and practice of the profession at large.

"Mr. Newton has demonstrated several new propositions, which are so many new truths, and are further advances in mathematical knowledge."—*Locke.*

The results of the labors of Donders and his assistants upon the accommodation and refraction of the human eye which have been given to the scientific world during the year 1864, by means of the "New Sydenham Society," may properly be called "new proposi-

tions, which are so many new truths and further advances" in ophthalmology. As the members of the Society have probably ere this rendered themselves familiar with the contents of this magnificent volume, embracing the long-continued researches of Donders, it is not necessary, perhaps not even becoming, for your committee to attempt analyzing these studies, already become fixed facts in ophthalmological and optical science. An analysis of these investigations upon the refraction and accommodation of the eye is in reality the book itself. It is, therefore, but left to us to show the bearing of these important truths upon our specialty, and our relation to our medical brethren. They have revolutionized the treatment of anomalies of accommodation and refraction as thoroughly as the invention of the ophthalmoscope revolutionized the treatment of internal affections of the globe. They have, almost like the demonstration of a mathematical problem, not only determined the existence, but the treatment of myopia, hypermetropia, asthenopia and astigmatism. Together with the invention of the ophthalmoscope, the results of this application of the higher mathematics to the solution of problems in physiological optics have served to raise our specialty to a much higher grade in medical science. In speaking of ophthalmoscopic literature, an English reviewer said:—"It has been happily observed of a book that once produced much controversy—the 'Vestiges of the Natural History of Creation'—that the most conspicuous fact in connection with its history was the discovery of previously unsuspected strata of ignorance in the so-called intelligent and educated classes. In like manner the introduction of the ophthalmoscope into England was the cause of some sufficiently startling revelations of a similar kind. Many of the leading oculists were found to be unconversant with the elementary facts of optics, and were therefore unable to comprehend the principles upon which the instrument was based, or to speak of it without unconsciously falling into error."—*Ophthalmic Review*, April, 1864, p. 90.

From remarks here and there cropping out in the journals in reference to Donders's book, we fear that there are still deeper "previously unsuspected strata of ignorance among the so-called intelligent and educated" surgeons, and even oculists of our day. Let this not be said of the members of this Society. Our duty to the profession requires us to be ever eager to learn, appreciate, and adopt all advances in ophthalmological science as well as in ophthalmological medicine and surgery. In this way only can we retain the position which our medical brethren are according us, and which is the surest means of shaking off from our specialty the fungus of quackery springing up from the soil of ignorance. The name of oculist will then no longer be a doubtful term. Already out of the profession comes a call for *scientific* ophthalmologists. A non-medical writer on physiological optics says:—"In the ordinary diseases to which the eye, like other parts of the

body, is subject, we may safely confide in the skill of the experienced physician; but in the diseases to which it is liable as an optical instrument, where optical science can alone direct us, we regret that professional assistance is difficult to be found. Guided by practice, the skilful oculist may dexterously extract the crystalline lens, or make an artificial pupil; but all the refinements of optical science are requisite in the practitioner to whom we commit the care of our sight; and we trust the time is not distant when men will be expressly educated for this branch of the healing art, and exhaust in their practice the rich resources with which science can supply them."—(*North British Review*, Nov., 1856, quoted in *Jago's Entoptics*, preface, p. 9.) In reality, ophthalmoscopy and the anomalies of refraction and accommodation are already becoming almost a specialty within a specialty. No better proof is needed than this to show that new truths have been discovered requiring the special energy and study of ophthalmologists. And the year that has passed has given us all opportunity to make ourselves masters of the researches of those who are the leaders in our specialty. In this, then, ophthalmology has truly advanced.

Ophthalmic Photography.—Some advance has been made in the method employed to obtain photographs of the fundus oculi of animals, by Dr. Henry D. Noyes, of New York, Dr. A. M. Roseburgh, of Toronto, Canada, and, we believe, also by Dr. Liebreich. The fundus of the human eye has not yet been photographed, yet we cannot doubt but that it will be done. It has been suggested that the quality of the light has not, perhaps, been sufficiently studied. That is, is there not some form of illumination to which the plate, but not the eye, is particularly sensitive? The photographist and the physiologist must combine their knowledge and efforts. It will certainly be a great gain to be able to photograph important cases of internal disease of the globe, for now the difficulty and expense of producing a colored lithograph, to represent even faintly morbid changes, is very great, and we all know how impossible it is to intelligibly describe what we see.

Autophthalmoscopy.—The inventions of Prof. Coccius, of Leipsic, Dr. Giraud-Teulon, of Paris, Dr. F. Heyman, of Dresden, and N. W. Zehender, of Bern, have lately "given us the gift to see ourselves as others see us." But the power of viewing one's own optic disk and retinal vessels is not simply a physiological wonder. It gives the ophthalmic student opportunity to study for himself by himself. Indeed, a good method of training himself in ophthalmoscopy is, to become by practice *au fait* in examining his own fundus oculi. He can also thereby learn what to see and how to see it. Although autophthalmoscopy is but in its infancy, yet we already have several different forms of the instrument, both for the upright and inverted image. It would not be safe to predict the results that may be developed by the autophthalmoscope. One thing let us note. It

sprung from philosophic ophthalmologists applying the laws of optics to physiology. It was not stumbled on, but wrought out by patient investigation and experiment.

Entoptics.—Prof. Donders's researches, and more especially Dr. James Jago's, have been given to the world during the year 1864. Entoptics is certainly one of the most difficult fields of study, and has consequently been lying fallow for some time. Dr. Jago has not only given us the means of investigation, but the results of these means, when employed. Although the ophthalmoscope, and more especially the binocular, has greatly removed the necessity of entoptical examination, yet Dr. Jago has so enlarged our method of determining the position and importance of ocular spectra that we can now hardly leave out this help to our diagnosis. His investigations certainly give us a series of new truths, and are therefore advances upon our former knowledge, whether they are applied or forgotten, to be again hereafter brought forward, when some additional discovery throws them out into relief, like these ocular spectra lying unnoticed or hidden till a glimpse through a perforated card calls them up as by the magician's wand.

Retinal Structure.—Heinrich Müller's researches on the structure of the retina in man and the vertebrates, published in 1856, have been the basis of our knowledge on this subject, and his anatomical investigations seemed so firmly fixed that they were considered as absolute. But Dr. Carl Ritter has given us lately his own continuance, as one might say, of Müller's work. He has certainly made a great advance over our former knowledge of the histological elements of the retina; so that Müller's views must be greatly modified. He regrets, with his readers, that Müller's death, just as he was completing his work, took away a critic who could both appreciate and weigh the value of his investigations. Till the anatomy of the retina is exhausted, its physiology must still be in a measure hypothetical. Dr. Ritter's careful deductions and patient research have brought us a long distance in advance of where Müller and those following him left us. These are the histological elements as he gives them:—Bacillar layer, granular layer, fibrous layer, ganglion-cell layer, nerve-fibre layer. He has traced the connection of these layers, and more especially shown and explained the supporting structure which holds and sustains them. This clears up a great deal before uncertain, and the anatomy of the retina commences to assume some definite shape. He concludes his work with this paragraph, the deductions from his investigations:—"Thus determining the functions of the separate portions of the nervous structure of the retina, the bacillæ simply receive the impression, their stimulation corresponds to the sensation: the granules convert the sensation into nervous stimulation; the granular cells give the sense of color; the ganglion-cells finally determine the retina's sense of location. Although I know very well that this is hypothetical, yet I

cannot but think that a definite expression of it will be of use." Late optical and physiological studies seem to support these views. We see how far they would carry us towards the true theory of vision. This is not, of course, the place to criticize them.

Binocular Ophthalmoscope.—We owe to Dr. Giraud-Teulon, and following him, Mr. J. Z. Lawrence, our thanks for the invention of the binocular ophthalmoscope, by means of which we are enabled to save a great deal of time and uncertainty in determining the position of extravasations, exudations, deposits, &c., in the vitreous humor, retina, and choroid. It is true, as Dr. Schweigger admits, that with the monocular ophthalmoscope it is possible to ascertain nearly all that the binocular instrument can reveal to us; but a moment's glance with both eyes is worth an hour's gaze with one. Probably in a short time ophthalmologists will use it to the exclusion of the monocular ophthalmoscope. A comparison of the two would be better than any description we can here give. Time will undoubtedly simplify as well as cheapen this instrument. It is, in the highest sense of the term, an advance upon our previous means of observation. Simply as a scientific or philosophical instrument, it will be of great value, as probably enabling us to settle many points in reference to binocular vision and so-called stereoscopic effect. It is a new means of experimenting in this field of physiological optics. Its general use will be looked forward to with interest by both the philosophical and pathological ophthalmologist.

Physiology and Theory of Vision.—Physiologists and philosophical ophthalmologists have, the last few years, given a great deal of time and study to vision, and their labors have been so productive of new truths as to attract the attention of the general scientific world. This has been, perhaps, in great part due to the invention of the ophthalmoscope, and the educated research called forth by it, as it brought again more forcibly before philosophers the human eye as the most attractive field for physiological and psychological study. The record of investigations for the last ten years is mainly contained in the works which we here enumerate.* It is of course impossible to give even a *résumé* of the results these authors have arrived at. Many optical and physiological experiments, always accepted as absolute, have been disproved or different deductions drawn from them. Others have stood the test of repetition by careful observers, and thus placed us in advance of our former knowledge. A carefully conducted physiological optical experiment is, as it were, however, but the anatomy, the deduction from it the physiology of vision. Some theories of vision have been again weighed in this recent research, and in this respect the past year has been productive of new truths. Others have not stood the test of crucial experiment, and thus we have likewi se gained groundin our difficult field

* Want of space compels us to omit the list of works referred to.—*Eds. B. M. and S. Jour.*

of study. But it may be asked, how has all this laborious experimentation helped us? In what way have we been advanced by it? Our answer would be: From just these studies sprung the ophthalmoscope, the laws of accommodation and refraction, and the true meaning of strabismus.

Mr. Abbott's book, "Sight and Touch," reviews, as it were, the results of the others mentioned, with the purpose of disproving the Berkeleian theory of vision. That is, he has tested this theory by the experiments and laws, and reasoning therefrom deduced, in the long series of investigations carried on by physiological ophthalmologists the past few years. The result is, that the eye must be placed much higher among the organs of sense. Through it we gain a greater knowledge of the external world than has hitherto been conceded. The received ideas in reference to stereoscopic effect must be greatly modified. The use of two eyes seems to give us a greater amount, besides a different power, of vision gained by one. There is much we would willingly dwell upon in this book, but it is not perhaps in place here. It is proper to state that Dr. Giraud-Teulon, of Paris, prosecuted similar studies in 1860. Mr. Abbott has reversed the theory that sight was dependent upon touch; and here we have made a great advance, and can proceed upon a sounder basis in optical experiment, which must be, as it were, the anatomy for physiological deduction. "The science of philosophy must henceforth give place to the philosophy of science."

In three great points, then, has ophthalmology advanced, or an advance been made sure and proved, during the year. First, in the laws of the refractive media of the eye in health and disease; second, in the anatomy of the membrane, upon which these refractive media form the picture; and thirdly, in the means by which this retinal impression becomes visual perception. But these three taken together are "*sight.*"

The past year has not perhaps been very productive of great improvements in ophthalmic medicine and surgery. Much it is true has been proposed, but time must test its worth, and say whether or no it is more than a revival or another application of former knowledge forgotten. It must be remembered that the old proverb applies to our specialty as well as to other branches of medicine, "There is nothing new that is true, or true that is new."

Yet in the every-day life, so to speak, of ophthalmology, the past year has not left us behind. There was a spirited meeting of the "Ophthalmologische Gesellschaft" in September, and the proceedings were published by von Græfe, Hess, and Zehender. A new ophthalmic journal, the "Ophthalmic Review," was started in London, and has been kept up with spirit and in the pursuit of scientific truth. The excellent "Reports of the Royal London Ophthalmic Hospital" have also been continued. Zehender's Klinische Monatsblätter and the Annales d'Oculistique contain ever fresh material

and useful digests. The "Archiv für Ophthalmologie" has gone steadily on at the head of ophthalmic literature. A number of new and exceedingly valuable works and monographs upon various subjects have appeared from the European press, such as Schweigger's Gebrauch der Augenspiegel, Zander and Geissler's Verletzungen der Augen, Wecker's Etudes Ophthalmologiques, Carter's translation of Zander on the Ophthalmoscope, J. S. Wells's Lectures on Glaucoma, Canton's Arcus Senilis, and many others.

If, during these times of excitement and anxiety, we American ophthalmologists have not perhaps contributed our share towards the advancement of our science, we shall be pardoned by our medical brethren. We have, at least, by the very formation of this Association, shown that we are anxious to learn, by mutual intercourse and interchange of thought and criticism, and that we ever have in view the one great object of our specialty, the restoration of sight.—*New York Medical Journal.*

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE PROVIDENCE MEDICAL ASSOCIATION. BY W. H. TRAVER, M.D., SECRETARY.

Ovarian Tumor.—Dr. Collins reported the following case, and exhibited the specimen. It occurred in a married woman, aged 58, mother of several children. The tumor first made its appearance in the left side of the abdomen about two years ago, and could be distinctly felt through its walls. Made an examination some two months since, and found some effusion of serum in the abdomen. He performed paracentesis on three occasions, and at each time some six quarts of serum were drawn off. Bowels regular, and no great difficulty was experienced in voiding her urine. The left thigh was swollen—the result of inflammation of the femoral vein. He consulted with Dr. Burnham, who advised an operation, which was performed on June 3d. The tumor was located in the right ovary, and was attached to the uterus in several places; also to the round ligaments and ascending colon. The womb was enlarged. The following morning there was great depression, and she died at noon of the same day. Dr. Collins did not profess to say what the character of the tumor was, as he had not examined it.

Ovariotomy.—Dr. Collins reported the following case of ovariotomy, occurring in the practice of Dr. Burnham. The patient was a young lady, aged 18. The tumor made its appearance about a year previous to the operation. It could be distinctly felt through the walls of the abdomen, and appeared round, in lobes or lobular. It had been twice tapped, and a large amount of serum removed. The incisions were made in the manner usually practised in operations of this kind. The tumor occupied the right ovary, and adhered to the abdomen at several points. It was hard, solid, and weighed nine pounds. The disease proved to be encephaloid. The patient was not much exhausted; pulse 116. The following morning, 130. She be-

gan to sink in the afternoon, and died during the night. Dr. Collins thought the tumor was originally multilocular, and had subsequently taken on encephaloid.

Miscarriage; Placenta Prævia.—Dr. Perry briefly reported a case of miscarriage, complicated with placenta prævia, occurring at the fifth month of gestation. When called, he found there had been much hæmorrhage; the patient was exsanguined. After giving a large dose of ergot, he made a vaginal examination, and found the os dilated, with the placenta adherent. The placenta was detached by means of the finger, and was expelled with the fœtus. The umbilical cord was but eight inches in length.

Partial Luxation of the Radius.—Dr. Ely briefly reported several cases of injury of the elbow-joint occurring in children. Those in whom the injury occurred were unable to bend their arm, or raise it to their head. Little or no pain was experienced, and in the majority of the cases nothing abnormal could be detected, either by the eye or manipulation. It was generally produced by lifting the child by its arms. It was thought to be a partial luxation of the radius back upon the humerus. The luxation was reduced by grasping the hand and forearm, radiating it, and suddenly carrying it to the head.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, AUGUST 17, 1865.

Russian Plague.—Decision of the City Government with Regard to Quarantine.—The question of a rigid quarantine, to exclude if possible the so-called Russian plague from our city, has been wisely settled, we think, by the Board of Aldermen, in accordance with the suggestions of the Board of Consulting Physicians. This is all the more satisfactory, inasmuch as it shows that this board is not named *lucus a non lucendo*, as might have been inferred from the course of the City Government towards them for the past four years. There certainly is no good reason that this annually-elected Board should be in name only, as they have generally been, consulting physicians. We welcome, therefore, their action in the present instance as proof that the city authorities intend hereafter to give that weight to their opinion on questions of public health which is no more than their just due.

We have from time to time enlightened our readers upon the true nature of the diseases which have excited so much apprehension through the exaggerated reports in the daily press. Indeed, if we mistake not, the first authentic accounts published in this country were in the pages of this Journal. Our city government had special reason for apprehension at the approach of the pestilence from the official notices which they received from Washington. The Assistant Secretary of the Treasury, on the 26th of June, addressed to the Collector of Customs in Boston a letter, enclosing a despatch from the United States Consul at Port Mahon, dated May 31st, calculated to excite much alarm, and urging a more strict enforcement of quarantine. This letter echoed the tone of popular apprehension and opinion in some parts of Europe, and urged a stringent examination of all

cargoes from Russian and Turkish ports, concluding by the suggestion that the disease was the same as the fearful plague which once devastated London, the ravages of which are so graphically depicted by Defoe.

On the 8th of June we published an abridgement of the Russian official account of this alarming epidemic, as it appeared in the London *Medical Times and Gazette*, and up to the present time we have seen nothing more satisfactory or better calculated to dispel popular apprehension on this subject. We observe that a portion of this report, translated by Dr. B. J. Jeffries, is embodied in the report of the Consulting Physicians in the document before us. Published in this connection it cannot fail to have an excellent effect, as it will reach a class of readers who do not see a medical journal from one year's end to the other. The report of the Consulting Physicians concludes as follows :—

"The Board of Consulting Physicians are satisfied, upon good authority, that the published accounts received of the extent and malignancy of the disease are highly colored and exaggerated. They are also decidedly of the opinion that even if the disease was such as has been most feared, it is not a proper subject for the restrictions of quarantine. And as such a disease has never prevailed in this locality, and as the conditions under which it prevails elsewhere do not exist here, it is neither to be expected nor feared.

"The Board, under the conviction that no quarantine is required, and that no arbitrary restrictions should be enforced, do not advise any additional stringent measures in the external sanitary relations of the city. The only change which they would suggest is, that the order issued in reference to vessels coming from southern ports where yellow fever exists, should be altered to embrace all vessels from any port in any country where malignant diseases are prevalent.

"Although the consulting physicians think that the external sanitary relations require so little change, they are very strongly of the opinion that the *internal* regulations for health do admit of, and imperiously demand, very great and important changes and reform to obtain the object for which they are made.

"When it is considered how very few of the so-called contagious diseases are really such, and how greatly even these are controlled by hygienic measures, and that the mortality of all epidemic diseases, and even their occurrence, is greatly due to the neglect or ignorance of proper sanitary or hygienic measures, always within the control of Boards of Health, the great responsibility of such bodies, and the duty and necessity of wise and faithful action on their part, is very obvious. The present hygienic condition of our city is such as to leave it unguarded against the invasion of epidemics, and quite unsafe against their prevalence; but as it is known to this Board that the City Government have had their attention called to this important subject, and are engaged in searching out the plague spots and pestilential localities in order to remove them; and are also devising measures for a general cleansing and purifying of the city, they do not enter more fully into this subject at this time, but leave it with the remark, that, if we desire or expect that the 'pestilence which walketh in darkness' should pass over us in silence, unfelt and unseen,

we must be a perfectly clean, and to the utmost within civic control, a morally pure city.

"One recommendation only is now made to the City Government, which is most earnestly and confidently offered—That the definite rules and regulations in the 'Sanitary Code for Cities,' adopted by the National Quarantine and Sanitary Convention, a copy of which is herewith transmitted, with such modifications as may be deemed necessary, should, so far as the City Charter and the laws of the Commonwealth will permit, be taken as the basis of action by the Board of Health. And if upon inquiry it should appear that any further legislation is necessary for this purpose, that it shall be procured."

The recommendation in the last clause has our own most cordial approval. The Code referred to is a most carefully and elaborately prepared system of rules, and we sincerely hope it may receive the consideration which its value and importance deserve.

Curative Treatment of Phthisis.—At a recent session of the French Academy of Sciences, M. Fuster read a communication on the curative treatment of phthisis. He announced that he had been trying, since the 11th of April last, in the clinical wards under his charge at Montpellier, in the treatment of pulmonary consumption and other affections characterized by a general consumptive condition, a method of treatment which had given him so much encouragement that he felt obliged to make it known.

His treatment consisted in the use of raw mutton or beef, together with alcohol largely diluted and in small doses. The meat, reduced to a pulp by pounding it, and passing it through a sieve to remove all the tendinous portions, is given in balls rolled in sugar, or as a sugared pulp in teaspoonful doses, in the quantity of one hundred to three hundred grammes daily. A drink made by mixing a hundred grammes with five times as much cold water sweetened, answers as a beverage for these patients. The alcoholic draught, composed of one hundred grammes of alcohol of 20 degrees Baumé, diluted with three hundred grammes of some sweetened vehicle, is given in teaspoonful doses from hour to hour; the proportion of alcohol and the interval between the doses should be varied, according to the susceptibility of the patient.

"The combination of these two agents is necessary to success in this method of treatment. The first appears to me to have a reconstructive agency, and the second a more direct action upon the blood-producing organs.

"There is nothing new in this method of medication, unless it be the combination of the two remedies mentioned and their application to consumptive patients."

The author declared that by this mode of treatment many patients affected with pulmonary consumption of a very grave character, and with purulent infection, had been perfectly cured.—*Translated from the Archives Generales de Médecine* for July, 1865.

We have received the first number of a new monthly medical journal, published at Montreal, with the title, *Gazette Médicale, Revue*

Mensuelle, Medico-Chirurgicale. It is a handsome quarto sheet, of sixteen pages, printed in large and handsome type, and promises to be a creditable representative of the medical profession in the British Provinces. We cannot refrain from remarking, however, that in the present number we find an article on the treatment of hæmorrhoids by persulphate of iron, accredited to the American Journal of British Science. Whatever it may be called, the article does not come under the head of *British* science, for it was originally published in the *Cincinnati Lancet and Observer* and copied into our pages. The editor of the journal referred to probably thought he had *Anglicised* it by carefully striking out those parts of it which betrayed its American origin; such as that the surgeon recommending this treatment was in the United States Army, and that the patient whose case is given was also a Major in our army. We can add our own testimony to its efficiency.

The subscription price of the Gazette Médicale is $2 a year.

We most cheerfully insert the following communication, regretting that we should by implication have subjected the Editor of the Dental Cosmos to the charge which he so successfully repels. It probably grew out of an accidental error on the part of the Dental Register, in crediting the article to the source from which it was originally derived.

Plagiarism.—*Messrs. Editors,*—I most heartily concur in your remarks on plagiarism, having frequently been subjected to the annoyance of this appropriation, without acknowledgment, of matter both original and selected, from the pages of a periodical with which I am connected. While, however, approving of the justness of your observations on the subject, I must disclaim the implication of dishonesty on the part of the Dental Cosmos, as the article alluded to was never presented in its columns, and it cannot be held responsible for the errors of a contemporary. In preparing matter for this periodical, I have always been particularly careful to give due credit to both author and publisher, but regret to say I have not always received equal courtesy. In order, therefore, to remove what might otherwise prove an erroneous impression respecting the character of the publication named, will you please present the foregoing statements in your valuable Journal, and oblige Very respectfully yours,

George J. Zeigler,
Editor of the Periscopic Department
Philadelphia, Aug. 8th, 1865. *of the Dental Cosmos.*

Health and Mortality of New York.—A correspondent of the *Boston Daily Advertiser* writes from New York as follows:—

"This city at present enjoys a good condition of health; indeed, it generally does in hot weather. But this humid atmosphere and intense heat must be prone to yield us a harvest of zymotic disease in some form. It is worth while to remark that a few leading maladies constitute our principal causes of mortality.

"In 1864, the reported mortality was 25,645, a death-rate of about 2½ per cent. Of this number about one half died of the following diseases:—Consumption, 3615; pneumonia, 1831; croup, 754; diph-

theria, 781; scarlatina, 899; marasmus, 1432; convulsions, 1561; hydrocephalus, 793.

"In 1863 the deaths were 25,196, of which were the following:—Consumption, 3485; pneumonia, 1713; croup, 908; diphtheria, 981; scarlatina, 903; marasmus, 1479; convulsions, 1752. About one third of the diseases were those of the respiratory system. We have little typhus and typhoid fever, and both are principally cases of emigrants.

"Cholera infantum is a cruel scourge, and from June until September writes its record indelibly. The deaths in 1863 were 1525, and last year 1311. This year the figures of 1863 will be nearest right.

"Smallpox was epidemic all winter, but has now almost totally disappeared.

"According to the Registrar, cholera was the prevailing epidemic during the twenty-two years preceding 1856, and after that diphtheria took the lead."

Cholera in Egypt.—From the same source we derive the following interesting letter on the cholera in Egypt:—

Alexandria, Egypt, July 19, 1865.

"The cholera is rapidly abating. The number of deaths reported yesterday was only 18 in Alexandria and 64 in Cairo. The maximum daily mortality has been 228 in Alexandria and 457 in Cairo.

"The whole number of deaths from cholera since the outbreak of the malady to the 18th inclusive, in Alexandria, has been 3931; in the same time 1369 deaths from other diseases have been reported, making a total of 5300. The population of Alexandria has been estimated at 175,000.

"In Cairo, from the outbreak of the malady (eight days later than at Alexandria) to the 17th inclusive, the deaths from cholera were 5249; from other diseases, 2300; total, 7549. The population of Cairo is estimated at 400,000.

"The mortality has been relatively greater in some other places. In Damietta, a town of about 40,000 inhabitants, where the disease did not appear till more than a fortnight after it had declared itself in Alexandria, the daily mortality after nine days was as high as 172, a rate which, if it had continued, would have swept the whole population of the town out of existence in eight months. The high rate happily continued but four days, and in Damietta as elsewhere there is a great amelioration.

"Very few cases have been reported at Suez, and the ravages of the disease have not extended south of Cairo.

"The north winds have continued, and the water in the Nile has begun to rise; eight inches were gained between the 10th and 16th. The alarm is rapidly yielding to more encouraging prospects."

Infantile Syphilis.—The period of incubation of infantile syphilis was much disputed in the recent discussion of the propagation of the disease through vaccination; and the question becomes still more complicated by some figures communicated by Dr. Simas, Physician to the Misericordia Hospital, Lisbon, to the Medical Society of that city. He has had under his own personal observation 216 cases of hereditary syphilis during 1858–65, and among these the symptoms

were observed in the first year in 27 cases; in the second year, in 49; in the third, in 56; in the fourth, in 30; in the fifth, in 14; in the sixth, in 16; in the seventh, in 7; in the eighth, in 2; in the ninth, in 7; in the eleventh, in 4; in the thirteenth and fourteenth, one each; and in the eighteenth, in 2. This is a very different statement to that of M. Depaul, who fixes the limit of the appearance of syphilis to seven weeks, or of MM. Diday and Roger, who fix it at three months. —*Medical Times and Gazette.*

Death of Sir John Richardson, F.R.S.—This distinguished naturalist died somewhat suddenly at Grasmere on Monday, June 12th. He was born at Dumfries in 1787, and was educated at the grammar school of his native town. On leaving school at 14 years of age he entered the University of Edinburgh, and devoted himself to the study of Medicine. After passing through the University he entered the navy as Assistant-Surgeon, and served at the siege of Copenhagen in 1807. In consequence of the zeal and ability he displayed on that memorable occasion, and "for having served in the boats during a night attack upon a French brig in the Tagus," he was promoted in 1818 to be Acting-Surgeon of the *Hercule*, a 74-gun ship. During the war with the United States, in Canada and Georgia he served as Surgeon to the 1st Battalion of Marines, and in 1819 accompanied Sir John Franklin's Arctic expedition as Surgeon and Naturalist. He also accompanied Sir John Franklin's second expedition in 1825, when he commanded two boats, in which he discovered the passage between the mouths of the Mackenzie and Coppermine rivers. In 1838 he was appointed by Lord Minto, then First Lord of the Admiralty, to be Physician to the Fleet, and in 1840 he was made Inspector of Hospitals. The deceased was the author of the "Fauna Boreali-Americana," the "Zoölogical Appendix to Sir Edward Parry's Second Voyage," the "Ichthyology of the Voyage of the *Erebus*, the *Terror*, and the *Sulphur*," and many reports and scientific papers. He received the honor of knighthood in 1846.—*Ibid.*

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, August 12th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	63	45	108
Ave. mortality of corresponding weeks for ten years, 1853—1863,	57.3	50.1	107.4
Average corrected to increased population - - - - -	00	00	117·05
Death of persons above 90 - - - - - - - -	0	0	0

Died,—At St. Augustine, Fla., July 19th, Dr. William E. Rice, late of South Boston, 28.

Deaths in Boston for the week ending Saturday noon, Aug. 12th, 108. Males, 63—Females, 45. Abscess, 1—accident, 1—imperforate anus, 1—apoplexy, 1—inflammation of the bowels, 1—congestion of the brain, 2—disease of the brain, 3—bronchitis, 2—cancer, 1—cholera infantum, 21—cholera morbus, 3—consumption, 10—convulsions, 2—debility, 3—diarrhœa, 6—dropsy of the brain, 2—drowned, 2—dysentery, 9—typhoid fever, 3—typhus fever, 1—fungus hæmatodes, 1—disease of the heart, 3—infantile disease, 4—insanity, 1—intemperance, 1—congestion of the lungs, 2—disease of the lungs, 1—inflammation of the lungs, 1—marasmus, 3—old age, 2—paralysis, 1—premature birth, 2—puerperal disease, 1—scrofula, 1—smallpox, 1—disease of the stomach, 1—sunstroke, 2—syphilis, 1—unknown, 4.

Under 5 years of age, 54—between 5 and 20 years, 9—between 20 and 40 years, 23—between 40 and 60 years, 13—above 60 years, 9. Born in the United States, 81—Ireland, 19—other places, 8.

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NEAR-SIGHTEDNESS A DISEASE, AND NOT MERELY AN INFIRMITY.

[Reported to the Boston Society for Medical Improvement, August 14th, 1865, and communicated for the Boston Medical and Surgical Journal.]

BY HENRY W. WILLIAMS, M.D., OPHTHALMIC SURGEON OF THE CITY HOSPITAL.

UNTIL a very recent date it has been a common belief, both among the profession and the public, that myopia, or short-sightedness, was scarcely worthy of attention. Its subjects could not, indeed, enjoy vision beyond a very limited range, except with the aid of glasses; but as they were supposed to require only such aid to place them on an equality with others, and were thought to have stronger vision for minute objects, they often deemed themselves, and were regarded by others, as fortunate in their infirmity.

It is very desirable that the attention of the profession should be called to the importance of this subject, as viewed in the new light thrown upon it by the ophthalmoscope, and that all cases of any considerable degree of myopia in adults and of inherited myopia in children should receive careful investigation, in order that they may be preserved, by timely prophylactic measures, from the serious consequences resulting from progressive pathological changes, which are almost certain to follow improper management of myopic eyes.

It is now well known that short sight is a consequence of an abnormal form of the globe, consisting in an elongation of its antero-posterior diameter. Its refractive power is thus in excess, and images of objects are formed in front of the retina. But this elongation does not equally affect all parts of the globe. It occurs principally in its posterior portion, and especially in the region surrounding the entrance of the optic nerve; where a bulging outwards of the sclerotica, termed posterior staphyloma, takes place. This is readily perceptible with the ophthalmoscope, and easily verified, when occasion offers, by *post-mortem* examination.

So long as the staphyloma is of trivial extent, it may scarcely or not at all interfere with excellent sight, and vision may be normal with the aid of glasses. But when it begins to deepen or

extend, it becomes a source of the greatest dangers. Every increase in its amount thins and weakens yet more the sclerotica and choroïd, and renders these tunics of the globe less able to resist further changes. The retina, distended over a larger surface, has its perceptive power diluted, and morbid alterations often manifest themselves in the macula lutea, the central point of vision. If the changes of the subjacent tissues continue to progress, the retina no longer accommodates itself to them, but becomes separated, and a serous infiltration interposes between it and the choroïd. These pathological phenomena involve much loss of visual power, and sight is no longer perfect, with or without the aid of glasses. They are, however, but the earliest and least of a series of morbid changes. Unless great care is taken that the patient does not devote himself to unsuitable employments, further developments ensue as the person advances towards middle age; the nutrition of the transparent media becomes disturbed, cloudy flakes show themselves in the vitreous humor, and the crystalline lens begins to exhibit opacities which go on increasing till cataract is fully matured, of which the removal by operation would, in these instances, be futile for the restoration of sight.

Herein lies the danger: the earlier progress of the disease is so insidious that, if unwarned by the physician, the patient reaches a point where arrest of his downward course has become impossible, ere he perceives cause for alarm.

Two cases I have lately seen illustrate these points.

Mrs. ——, slightly past middle life, had always been very myopic, but had, notwithstanding, allowed herself to do much fine work and carry on an extensive correspondence. At length she could no longer see well enough for these occupations, and had, even with the best glasses, only very imperfect vision at a distance. She complained of black spectra before the eyes, and of dull pain in the circumorbital region. On ophthalmoscopic examination, large staphyloma, with alteration in the macula, was found in both eyes. Floating opacities existed in the vitreous, and radii of cloudiness were beginning to form in the crystalline lenses. Vision must evidently gradually diminish.

A clergyman, about 50 years of age, had been since his recollection very short-sighted. After studious preparation he began his professional life, and since, had not only written his sermons, but had done a large amount of other writing, bringing his head near his desk in order to see. Two years before I saw him, on suddenly finding himself nearly blind in one eye, he consulted an oculist of this city, who advised the substitution of other glasses for those he had previously worn. This gave him no relief, and the sight of the other eye gradually failed.

On looking with the ophthalmoscope, I found the retina, in the eye first affected, almost entirely separated from the choroïd, and it

retained scarcely any perceptive power. The other eye exhibited large staphyloma, much opacity of the vitreous, and commencing cataract. The prognosis must now be very unfavorable; but had this gentleman been advised, early in life, to give up all thought of a profession requiring close application, and to devote himself to an active employment not requiring much use of the eyes for small objects, he might probably have enjoyed very good vision to his dying day.

The predisposing cause of these extreme pathological alterations is found in the elongation of the globe, which exists as an hereditary condition in most persons who are affected with myopia. But in many, probably in most cases, this abnormal shape of the globe and tendency to staphyloma is present in merely an incipient degree, and the predisposing influences may remain latent and harmless if the action of exciting causes does not supervene. If, now, the child is allowed to apply his eyes assiduously to study, writing, drawing, sewing, or other occupations requiring the head to be bent forward and the eyes continually accommodated for near objects, a higher and higher degree of myopia is perhaps rapidly developed, the muscular action associated with accommodation having an effect to compress and elongate yet more the posterior portion of the eyeball. The congestion of the vessels of the globe, caused by the inclined position of the head, increases the danger of further morbid changes.

Whenever, therefore, even slight symptoms of short-sightedness are manifested, and especially if myopia has been present in the family, on the side of either parent, the child should be examined at an early period with the ophthalmoscope, to ascertain if posterior staphyloma exists and what is its degree. This ophthalmoscopic inspection gives no pain or annoyance, and it is not necessary previously to dilate the pupil by atropia. Its importance cannot be too much insisted on; as progressive staphyloma is most liable to occur, and to lay the foundation for changes fatal to vision, between the ages of ten and twenty. Then, if ever, our interposition may avail to avert future blindness—a danger as yet little suspected by the patient or his friends.

If, on examination, we find only slight staphyloma, with a healthy condition of other parts of the retina, and with normal acuteness of vision, so that distant objects are distinctly seen with concave glasses of moderate power, we may permit even literary pursuits or professional studies, provided care is taken that the eyes shall be relieved by frequent intervals of rest, and the head kept, as much as possible, erect. But if, on the contrary, the normal acuteness of vision is diminished, if large staphyloma is already formed, or the retina or vitreous exhibit unhealthy conditions, it is unsafe to allow any employment requiring constant application of the eyes or a stooping posture. The individual should be advised to lay aside any preferences, and even to abandon occupations or trades which involve

danger, no matter at what sacrifice, that he may avert the threatened mischief. He should adopt such avocations as require only moderate use of the eyes, and avoid everything tending to produce cerebral congestion.

Another point on which it is important to insist, is, that glasses of suitable strength to give tolerably distinct vision should be habitually worn at all times when the eyes are not employed upon small objects. By so doing the eyes are spared the necessity of making strained efforts to recognize friends or things about them, which should be avoided on account of the muscular action they call into play, by which the pressure backward is increased and the posterior staphyloma enlarged.

RECENT RESEARCHES ON SCABIES.

THE final demonstration of the Acarus scabiei, by Renucci, in 1834, after two centuries at least of doubt about its existence, by no means decided the question as to the nature of scabies. There are, indeed, those who even now look on the animal as not the cause, but the effect of the disease. Dr. Frazer, of Dublin,* still maintains this view. The reasons he gives for this opinion are, however, for the most part, founded on error. He asserts that, in the Norwegian itch, the parasite is not the same as in the ordinary form of the disease; but, though this was at one time the opinion of Hebra, the more recent researches of Boeck have shown that it is not the case. Another of his arguments, that all persons are not equally susceptible of the contagion of scabies, is opposed to the latest views of Hebra, who thinks that the skin of every man offers sufficient accommodation to the acarus, if only full opportunity for contagion be afforded. A third statement of Dr. Frazer's, that "those who have passed through the unpleasant stages of an attack, and have been thoroughly cured, show a comparative, it might almost be said an absolute immunity from future infection," would no doubt, if true, support the view that something more than the acarus is concerned in the causation of the disease; but we are at present ignorant on what this assertion rests. Dr. Frazer himself insists on the "strange tendency which the disease shows to relapses, *when insufficiently treated*, and its indefinite duration when neglected."

There are others also whose views are similar. Devergie, one of the staff of the Hôpital St. Louis, the finest field in Europe for the observation of cutaneous affections, asserts that scabies may be a spontaneous disease, and that the presence of the acarus is only one of its subordinate characters; and Mr. Hunt, in a book which affords to Hebra most valuable opportunities of amusing his class, declares that "the real cause of scabies is *dirt*." But Devergie has

* Treatment of Diseases of the Skin, p. 66.

probably but few followers among the younger French dermatologists; and Mr. Hunt is not very likely to have many converts to his views in this country. We do not doubt that in a few years it will be universally admitted that scabies is propagated and produced solely by the parasite.

One of the questions which earliest suggested itself, when the existence of the acarus was proved, was whether the disease was transmissible from animals to man. A good deal of information upon this subject is given by Küchenmeister.* He admits that the acari of the cat and of the lion may be identical with that of man, which differs from them only in size. He states that Bourguignon observed the transference of the mite of the lion to the human subject, and *vice versâ*. Hardy says that, the lion of a menagerie having scabies, the keepers became affected with various eruptions, but no treatment was necessary; and he thinks that the acari of other animals produce in man only a temporary prurigo. Hebra, on the other hand, says that he has frequently observed the transmission of scabies from animals to man in the menagerie at Schönbrunn; and he thinks that the Sarcoptes equi, S. canis, S. suis, S. cati, and S. cuniculi of Gerlach, as well as the S. scabiei crustosæ, S. vulpis, S. capræ, S. squamiferus, and S. minor of Fürstenberg, are all varieties of the same animal. The acarus of the horse is, however, very different from that of man. Eichstedt† says that on examining some of the crusts taken from a mangy horse, in which the mite peculiar to that animal could not be detected, he found in it several specimens of the acarus scabiei of man. This appears to show that the differences in the form of the parasite are not, as is supposed by Hebra, merely due to differences in its seat. Hebra himself states that he has found the ordinary acarus scabiei in the camel, the Egyptian sheep, and the ferret; and he says that Fürstenberg has discovered it also in the horse, the lion, the llama, an ape, and a Neapolitan sheep.

There is no better way of tracing the development of scabies, and no more conclusive proof of the real nature of the affection, than to place an impregnated female acarus upon the skin, and then to leave it to its own devices. The fact of impregnation, which is of course all-important, is readily determined in the way pointed out by Gudden. We have only to extract an acarus, without injuring it, from a recent cuniculus, and then to cut off the portion of skin containing the cuniculus, and to examine it under the microscope. If it should present ova, we may be quite sure that the animal will afterwards deposit others. Hebra says, however, that a female acarus, even though it may lay eggs, does not always with certainty generate scabies; and he recommends for the artificial production of the disease, the application to the skin of a whole cuniculus removed from another person suffering from that affection.

* Manual of Parasites (Translation of the Sydenham Society), vol. ii., p. 50.
† Froriep's Notizen, 39, 1846, p. 269.

For the experimental investigation of the habits of the acarus, however, it is best to take a single female, and place it upon the skin. It moves briskly over the surface, and soon begins to attack the epidermis. It may either proceed at once to bury itself, or it may leave off after a time, and commence again at another spot. In penetrating the superficial part of the epidermis, the acarus seems to experience some difficulty. It places itself in a position almost vertical with respect to the skin, supporting itself by means of the long bristles which project from the hinder part of its body. Having once pierced the surface of the cuticle, it makes more rapid progress, and in from ten to thirty minutes it is completely buried. It naturally attacks in preference those parts of the skin which have the thinnest epidermis, and for this reason it appears often to select the entrances of the hair-sacs.

Having thus ensconced itself within the epidermis, it continues to traverse the rete mucosum in a horizontal direction, and proceeds to lay its eggs. The number of ova which are deposited by one acarus is variously estimated. Hebra has never seen more than twenty-four to twenty-six ova in one cuniculus. Gudden, on the other hand, counted fifty-one in one passage, at the bottom of which was the parent, which still contained ova; and he assumes fifty to be the ordinary number. The rapidity with which they are laid varies with the age of the acarus. An experiment of Gudden's, made in the winter of 1859–60, gives very precise information upon this point. He placed an acarus, which was ascertained to have laid previously only three ova, and which contained another nearly ready to be deposited, upon the skin of a healthy person, who was kept all day in a moderately warm room. At the end of five days, the cuniculus was cut out, and was found to contain eleven eggs. In other observations in which the acari were more nearly exhausted, the eggs were deposited much more slowly, one in two or three days. According to Bourguignon and Gudden, apertures are always found, at more or less regular distances, in the roof of the passages formed by the acari, and it is supposed that they may serve for air-holes. Their existence is positively denied by Hebra; but however this may be, it appears certain that they are not used by the female acarus as means of egress from the cuniculus. The animal, in fact, never emerges from the passage which it has formed for the reception of its ova. It continues to eat its way through the skin, and when its power of laying eggs is exhausted it dies. The whole duration of the life of an acarus is estimated by Gudden at three or four months. Impregnated females, placed on a healthy person's skin, were found by him alive, but exhausted, in the seventh or eighth week afterwards.

The "cuniculi," or passages formed by the female acarus ("sillons" of the French, "milbengänge" of Hebra and other German authors), are so important in the diagnosis of scabies, that a full description of them can hardly be otherwise than valuable to an English reader, for

we believe that in this country they are by no means so generally recognized as on the Continent. In the following account of them we follow chiefly that given by Hebra in the recent number of "Virchow's Handbuch." Their simplest form is that of a more or less curved, dotted line. Their color varies with their position, and with the station in life of the subject on whom they are found. On the hands and feet of the lower classes they are generally black; on the penis, buttock, elbow, and knee, even of such persons, they are usually white; and in people who wash very frequently, they are often white even upon the hands. The dotted appearance is caused, according to Gudden, by the air-holes which he asserts to exist in these passages. Hardy and Bazin state that it is produced by the small black fæces of the acarus which are always found in the cuniculi. Hebra ascribes the dotted appearance to dirt, which, he remarks, penetrates the cuniculi so completely that it cannot be removed by washing or even by friction: so that, in people who are very dirty, the effect of ablution is to make the cuniculi more distinct, by placing them in marked contrast with the rest of the skin. The length of a passage varies from one millimetre to several centimetres. The longest which Hebra has seen measured ten centimetres (nearly four inches); its usual length is about one and a half centimetre. Bazin compares it to a slight scratch caused by a pin; but the comparison does not appear to us a good one. The two extremities of the cuniculus are called by Hebra the "head" and the "tail," the former being the point at which the acarus entered. It is usually slightly raised above the surface of the skin, and whiter than the other extremity, at which the acarus may be observed as a sharply-defined roundish point, which is rather deeply situated.

This description of the cuniculus is generally applicable to those which are seated on the two surfaces of the hands and feet, or on the sides of the fingers and toes, or on the exterior surfaces of the limbs, especially the elbows and knees. On other parts of the body these appearances are generally modified by the development of a vesicle or a pustule beneath the cuniculus. These vesicles usually begin at the head of the passage, but frequently extend beneath it, so that it lies in their roof. Gudden supposes (and Bourguignon had previously suggested the same idea) that they are produced by a secretion from the acarus, which acts as tincture of cantharides might do; and he quotes in favor of this view the fact stated by Bourguignon and confirmed by himself, that the inoculation of a mass of bruised acari beneath the skin causes the development of a pustule resembling that of variola. However this may be, the acarus always maintains its position beyond the area of the vesicle; and therefore, when a crust is formed, the parent animal is never found in it, though it often contains ova or young acari. There is every reason to suppose that these crusts are often capable of pro-

pagating the disease, but experiments made with that object appear to have generally failed.

Sometimes the cuniculus presents a modification which it is important to recognize. It is then seated on a red elongated eminence, forming a white dotted line upon its summit. Cazenave seems to have noticed this appearance of the cuniculi which are found on the back and neck, and describes them as occupying the summit of tubercular elevations. Hebra states that such cuniculi occur also on the penis, the fold of the axilla, the umbilicus, the nipple, and especially on those parts of the back which are subject to pressure during sitting or lying. In infants the passages may present this form on any part of the body. Another modification is afforded by old cuniculi, when the vesicle at their head has disappeared, leaving a red spot with a white edge, which is continuous with the sides of the passage, so that Hebra compares its shape to that of a retort.

Cuniculi are undoubtedly found most abundantly on the hands and feet. Hebra, indeed, asserted at one time, that in 98 per cent. of cases of scabies they are confined to these parts. In 1844 he stated that the only other points at which he had found them were the penis and scrotum, the forearm (and that but seldom), the anterior surface of the thorax, and the knees. He now, however, admits that they may be detected elsewhere. Other observers do not agree with Hebra in the statement that they are very frequent on the feet. According to Lanquetin, in France they are rarely seen there; and Gudden says that in the lower limbs, the further from the trunk, the more rarely are they found. Hebra insists on the fact that in women the line of junction of the inner side of the foot with the dorsum is a favorite seat for them. It is well known that they are rarely to be detected upon the face. Lanquetin has, however, extracted the acarus from the forehead of a patient in the "service" of M. Cazenave. It is stated that Augias Turenne took one from within the lower eyelid from a "sillon" which occupied its free edge, *in an infant.* Dr. Hillier and others have also found cuniculi in rare instances on the face or forehead of infants; and of this, as we shall see, Gudden gives an explanation. The only other case, so far as we know, in which an acarus has been found lodged in a true mucous membrane, is that described by Hebra, who once found "a beautiful cuniculus, containing an acarus and eight ova, within the urethra, about a line from the meatus."

Eichstedt stated that the ova are not deposited in the egg-passage in a continuous series, but that there are always intervals after two or three, or at most six, ova. Gudden admits that this is the case in the cuniculi which are seated on the hands, where the acarus is exposed to frequent disturbance; but he says that on the trunk as many as twenty-one eggs are often found in an unbroken row.

Embryos are rapidly formed in these ova. In examining under the

microscope any cuniculus in which several eggs have been deposited, these are usually found to present different stages of development. There are, however, rarely more than from eight to fourteen which contain embryos; the others are merely egg-shells, from which the young acari have already escaped. Assuming that the parent animal lays one or two eggs daily, this gives some idea as to the rate at which they are hatched. There is, however, more direct evidence on this point, thought it is not very satisfactory. If the ova are placed in watch-glasses and kept at a proper temperature, which is effected by fixing them in the axilla, they may be hatched artificially. Gudden says that four days was the shortest time within which the young acari have left the shell in his experiments. The statements of earlier observers are rendered valueless by the doubt whether the ova had been recently deposited when the process of incubation was commenced. It is, however, tolerably certain that the time is not always the same; for Gudden says that, after placing upon the skin acari which no doubt at once proceeded to deposit eggs, no empty shell was found within the cuniculus, in one case on the fifth, in another on the sixth day. It would be of great importance to ascertain how long the ova retain their vitality, when they are placed under unfavorable circumstances; but as to this point there is at present no evidence.

Having left the shell, the young acari almost immediately make their exit from the cuniculus also; and, according to Gudden, they avail themselves of the air-holes which he describes as existing in its roof. They then move over the surface of the skin with considerable rapidity, and, after a time, imbed themselves again within the cuticle. The passages which they form are usually very short; Gudden says he has seen some a line in length, but that these are rare exceptions. He states, however, that the young penetrate into the skin more deeply than the older acari, and that they therefore produce more irritation. Their bite is often followed by the appearance of a small papule or vesicle, in which exudation shows itself on the second day. Before this time the animal has usually moved off to another part of the skin. Hence the young acari are very difficult to find; but, according to Gudden, a diagnosis may sometimes be made, in slight cases of scabies, in which none of the larger cuniculi are to be detected, by cutting off the heads of some of the vesicles or papules, and examining them, without any varnish to render them transparent. The entrance of the passage formed by the young acarus may then be made out. When the light comes from below, the dried edge of the opening looks dark. Should there be any doubt as to its nature, the question may often be settled by the discovery of the fæces, which are smaller and paler than those of the adult acarus. In order to obtain specimens of the young animal, the best plan is to rub oil of turpentine over a portion of the skin; this kills them, and they may then be found imbedded in the papules or vesicles which first appear on the part to which the oil of turpentine was applied.

The young acari have at first only six legs, but they soon shed their skin, and then acquire eight legs. The exact number of "moults" passed through by each acarus is perhaps not certainly known; Gudden supposes that the animal changes its skin three times. Before the first moult the acarus is characterized, according to him, not only by its six legs, but also by its having only two bristles at the posterior extremity of the body, and ten of the longer spines on its back. With its eight legs it acquires also four "bristles" and twelve "spines." After the second moult it presents fourteen "spines." After the third moult the sexual characters become apparent; and the male and female also differ in the number of spines, the female retaining fourteen, while the male has now only twelve. The size of the acarus also varies, according to the degree of its development. Gudden admits that it is possible that his account of the number of "spines" in the different stages may not be absolutely correct. While it is changing its skin the animal remains imbedded in small cavities in the skin, similar to those formed by the young acari. It would appear that about six or seven weeks are required for the development of the acarus, from the ovum to its becoming impregnated. Gudden says that in about three months after receiving a fertile female acarus upon the skin, a person would generally be covered with the eruption of scabies.

The discovery of the male acarus is claimed by several observers. The French ascribe it to Lanquetin, who found it in the year 1851, but who states himself that he had seen one before in the collection of M. Bourgogne, who had obtained it from an *employé* at St. Louis, but who did not know how to discover it. According to the Germans, the credit belongs either to Krämer or to Eichstedt. The former found it in 1845, but appears not to have published his drawings till 1846. Hebra quotes his description of the suckers on the inner pair of the hind legs, which are peculiar to the male; and therefore there can be no doubt that he really did see it. Lanquetin does not notice his claim, but disputes that of Eichstedt, who perhaps discovered it about the same time (1845), on the ground that the latter does not mention the presence of these suckers. It is therefore possible that the acari which he found may have been young females. The male acarus is very difficult to find. It occupies a small hole in the cuticle, similar to that tenanted by the young animals. According to Worms, it is very often to be found in the neighborhood of the larger egg-passages. It may be seen with a magnifying glass as a little brown point in the cuticle. Its presence appears never to excite any inflammatory action in the subjacent skin. Gerlach supposed that there was only one male acarus to about ten females, but the idea of the rarity of the male probably arose from the difficulty of finding it; for in the Norwegian scabies and among the cheese-mites males and females are stated by Gudden to occur in about equal numbers.

As might be expected, there is no very certain information as to the

way in which impregnation of the female acarus is effected. In a case of the Norwegian disease, Hebra found a male and female, both dead, lying the one over the other. There is, however, nothing to show that this was not accidental. Gudden states that there is not much difficulty in observing the act of copulation in the cheese-mites. The male and female then have their backs turned towards each other, and the abdomen of the male slightly envelopes the female. He says that the male becomes visibly smaller, and the female larger, during the process. In his later pamphlet he states that in the case of the acarus scabies, copulation occurs within the cuniculus occupied by the female after the last moult. He has several preparations in which he has been able to make out the points at which the male entered and left the passage. This he seems to have determined by the smaller size of the fæces deposited by the male. Gudden has also specimens of cuniculi in which the female underwent the process of moulting for the last time, and which have afterwards been continued onwards as egg-passages.

It is well known that the acarus is exceedingly sensitive to changes of temperature. Itch-insects, when first extracted from the cuniculus, often remain motionless; but if the glass slide on which they are laid is warmed, or if the warm breath is allowed to pass over them, they at once begin to move. Gudden states that, when they are placed upon the skin, the rapidity of their movements is always observed to depend upon the temperature of the surface at the time. Admitting the influence of warmth on the activity of the acari, it seems natural to ascribe to the movements of these animals the irritation which those who have scabies experience when the body first becomes warm in bed. Everybody knows that the itching is then worse than at other times; and Gudden says that a similar increase of irritation is felt whenever the skin is warmed, whether by the sun's heat, by exposure to a fire, or even by exercise; and, according to the same observer, cooling the surface quickly relieves the itching.

Some of the other peculiarities of scabies appear to receive their explanation on the same principle. If the acarus moves only on those parts of the skin which are warm, and therefore chiefly at night, it would seem to follow that parts which are uncovered during sleep will remain free from their presence. In this way Gudden accounts for the well-known fact that the face rarely presents any traces of the eruption in cases of scabies, and he states that this immunity is enjoyed by the face only when it is exposed at night; and, as we have already seen, several observers have found acari on the face or foreheads of infants, who lie with those parts deeply imbedded in pillows. An experiment made by Gudden points to the same conclusion. He placed a female acarus upon the left hand of a man who always slept on the left side, and with the clothes carefully pulled up round his chin. The young brood were traced up the arm on to the trunk; and one was caught on the left cheek, which

lay in the warm. The other side of the face remained free from their presence. The same writer says that cuniculi are rarely found on the feet of people whose feet are constantly cold. He also relates a very interesting case in which acari occurred in great numbers on the trunk, while none could be detected on the hands. This patient was confined in a strait-jacket, and her hands and feet were always cold, and did not become thoroughly warm even when she was in bed, as she was so unquiet that the bed-clothes could not be kept over her. The inner side of the arm, which was fixed to the side, presented a few cuniculi. This case is the more conclusive, as Gudden states that it was left undisturbed for a considerable time.

We are inclined to explain in a similar way a fact which seems to have been observed first by Hebra, and to which we have more than once heard him draw the attention of his class—that the disease is always present in large quantity on parts of the skin which are exposed to pressure. Thus in cobblers, tailors, weavers, and other artizans who sit on hard benches or stools, the buttocks, and especially those parts of them which come in contact with the seat, are always covered with the eruption. This consists in part of papules, in part of pustules and crusts; and some of these elevations of the skin present cuniculi on their long axes; others contain no parasite. On the other hand, in joiners, carpenters, and bricklayers, this part of the body is unaffected by the disease. Again, in women the eruption always shows itself on those parts of the skin which are pressed on by straps or girdles; and the pressure of garters, trusses, or of any tight article of apparel, or even of a crutch, is said by Hebra to be sufficient to produce the same effect. He accounts for these facts by ascribing the papules and pustules to direct irritation of the cutaneous surface; but it seems to us more reasonable to suppose that the pressure keeps up the warmth of the skin at that part, and that this favors the development of the acari, and at the same time prevents their wandering to other parts of the epidermis.

Hebra, however, does not admit that the distribution of the itch-insect over the skin is influenced to any great extent by temperature; but his reasons for this opinion do not appear to us to have any great weight. He says that if it were so, the eruption of scabies ought to increase rather than diminish during the progress of acute diseases, when the patient is kept constantly in bed; but there is every reason to believe that the morbid condition of the system has in this case a direct influence in checking the development of the parasite. Another of his arguments is, that if the acarus loved warmth, it ought to select the axilla, the bend of the elbow, and the softer parts of the skin, rather than the hands and feet, the penis, the buttock, and the extensor surfaces of the joints, on which parts the cuniculi are found most abundantly. But we have already seen that at the moment when the acari are moving over the surface of the skin, these parts are for the most part warm, and that the distribution of the acari is rather favor-

able to the view to which Hebra is opposed. Again, he gives as a reason for thinking that the acari are not much affected by external warmth, the fact that they reside in the deeper layers of the cuticle, which must be kept of a nearly constant temperature by the blood circulating through the derma; but this appears to us to remove a difficulty in the way of Gudden's view, by accounting for the fact that the ova can be developed in the cuniculi which are seated on the hand, and which must otherwise be exposed to considerable variations of temperature.

The truth is that, in Hebra's opinion, the acarus forms a very unimportant element in the causation of scabies, except so far as contagion is concerned. He criticizes the views of Gerlach and Aubé and others, who looked on the acarus as a kind of nocturnal beast of prey, which hunts for spoil at night on the surface of the skin, and retires during the day into the dark gallery which serves as its retreat. He says that it is not likely that the acari leave their stations of their own accord and without necessity, and take long journeys, in order to seek at another spot, and with considerable trouble, what they can get abundantly by staying where they are. Even in the propagation of the disease, Hebra regards them as altogether passive. He thinks that the cuniculi are torn open by the patient's finger-nails, and that in this way the ova and young acari are carried not only to the skin of other persons, but even to different parts of the same patient's body. Now, it is universally admitted that the female acarus never emerges from the cuniculus in which she lays her eggs; but it appears to us to be quite established, by the experiments of Gudden and others, that the young acari have the power of distributing themselves widely over the skin by their own movements; in fact, according to Gudden, they probably seldom remain more than three days in the same place.

Hebra makes the remark (and other dermatologists have said the same thing) that, viewed as a disease of the skin, scabies can scarcely claim an independent place in the scheme of classification, but that it should be regarded rather as an artificial eczema, caused by the presence of the acari and by the *scratching of the patient*. Now it is obvious that, if the acarus be the sluggish animal which Hebra supposes it to be, its presence in the skin is not likely to give rise to very much inflammation; and accordingly we find that of the two factors to which he ascribes the development of the eruption, the scratching on the part of the patient is the one to which he attaches most importance. It has long been known that the severity of the eruption is by no means proportionate to the number of acari which can be discovered, and that in the pustular scabies of children scarcely any cuniculi are sometimes to be found. Hebra also states that in no case does the seat of the acari and that of the eruption correspond; for while the former are found chiefly on the hands and feet, the penis, &c., the eruption is always more abundant on the anterior surface of the body, between the mammæ above, and the

knees below. This he accounts for by supposing that the acari only produce a vague itching, not referred to any particular point, and that therefore the patient scratches himself at that part of the body which is most accessible to himself; that is to say, on the chest, abdomen and thighs. To us this explanation does not appear very satisfactory. With the exception of those papules or pustules on which cuniculi are seated, Hebra does not admit any part of the eruption of scabies to be caused directly by the irritation of the acari, but regards it all as the effect of scratching, with the exception of those appearances which, as we have seen, he ascribes to pressure.

There is, however, good evidence to show that papules and pustules may be produced in scabies, independently of scratching. Gudden says that his patient, who was confined in a straight jacket, presented tolerably large pustules, not only on other parts, but also on the shoulders, which were but little exposed to external irritation. Again, he placed a female acarus on the skin of a healthy man: she formed a cuniculus and deposited ova. Even during the first few days a kind of itching was felt over the whole body, which he rightly ascribes to excited attention; but on the ninth and tenth days a new sensation was felt, which was referred to the hand, and resembled a pricking or gnawing; and before long papules and vesicles made their appearance, and gradually increased in numbers. *Scratching was altogether refrained from*, and the eruption was caused solely by the bites of young acari. The point is not, perhaps, of much importance, for every one must admit that scratching does to a great extent aggravate the eruption in most cases of scabies; but it is, as we think, quite clear that the great German authority on cutaneous diseases is not altogether justified by the facts in his views upon this subject.

There can be no question that, since the appearance of the cuniculi has been thoroughly understood, the diagnosis of scabies has been immensely facilitated; it has, in fact, in a large number of cases, become a matter of demonstration. But we doubt whether these passages are generally recognized by medical men in this country. Only three or four years since, an eminent physician recommended searching for ova, rather than for the parent acarus, in doubtful cases. We have several times tried to find them, as he advised, by scraping the skin or examining the crusts; and, as might be expected, we have always been unsuccessful. But when one has once learned thoroughly the appearance of the cuniculi, the finding of the ova is often an affair of a few seconds only. We would strongly recommend to those who are learning medicine, the practice of slicing off with a sharp knife or pair of scissors any doubtful cuniculi, and examining them, *en masse*, under a low power of the microscope. In order to remove the parent acarus, it is necessary to cut rather deeply; but the detection of the ova or of the fæces may usually be effected without causing the slightest pain. The recognition of these cuniculi is of the more importance, because it appears that in some

cases they are the only manifestations of scabies. Baum and Eichstedt have especially drawn attention to this form of the disease, in which there is no trace of papules or of pustules; and Lanquetin describes a similar case, that of a young hysterical girl, who did not suffer from itching, and whose skin was quite healthy. This case might no doubt be cited in favor of Hebra's opinion, that the eruption is caused by scratching; but it is more probable that some morbid state of the cutaneous sensibility caused the absence of both the itching and the eruption.

We have already quoted the directions of Gudden for discovering the young acari or the short cuniculi in which they dwell. Gudden thinks that in almost every case of scabies, even though none of the longer passages can be found, it will be possible to detect those of the young animals; but it does not appear that he has under observation more than a small number of patients. In his earlier papers Hebra asserted that without the discovery of the cuniculi we are not justified in concluding that scabies is present. But the experience of 40,000 cases has caused him to change his opinion, and he now says that it is possible to make a diagnosis of the disease with great probability, if not certainty, in cases in which no cuniculi, nor even any of the papules caused by young acari, can be recognized. There can be no doubt that such cases do sometimes occur. Moreover, it must not be forgotten that the presence of cuniculi on the hands may be interfered with by many circumstances. In those who wash their hands very frequently, or who use pumice-stone to cleanse them, these passages are quickly destroyed; and, according to Hebra, they are also absent on the hands of washerwomen, hatmakers, and bricklayers, because these people employ in their business substances which are prejudicial to the acarus. In Paris an exaggerated importance is attached to the presence of a cuniculus on the skin of the penis, or on the glans, in the diagnosis of this disease; and according to Piogey, scabies is sometimes limited to that part only. We have heard Hardy insist on the fact, which we think he has also published, that eczema, confined to the female breast, is almost always caused by the presence of acari.

In No. LXVI. of this Review (April, 1864, p. 392), an account was given of the "rapid cure" introduced by Hardy at St. Louis. This method appears to be attended with very considerable success, and it undoubtedly presents the great advantage that it is carried out under the eye of the physician. Lanquetin states that it is doubtful whether all the cases are cured, as they are not kept under observation within the hospital. Great irritation of the skin is sometimes caused by this treatment, and therefore it is not adapted for private practice. Moreover, as Hebra remarks, the saving of time is more apparent than real, for the disappearance of the eruption must always take some days; and till that has occurred, the lay observer would not believe that a cure had really been effected. Al-

together, Hardy's plan of treatment seems best adapted for soldiers and the poorer class of laborers. We have often wondered why one of the large metropolitan hospitals does not establish a "skin department" on a large scale, in which these affections could be treated locally with baths, &c., on the premises, as is done in St. Louis and at Vienna.

In cases in which the eruption is generally diffused and severe, while cuniculi can be found only on certain parts of the skin, it might perhaps be advantageous to recommend inunction only at those points. Hebra states that he did this at one time with very fair success, but he then believed that the acari were rarely to be found except on the hands and feet; and when he gave up this opinion, he seems to have modified also his practice, so that his statements upon this point ought perhaps to be received with some caution, and as indicative of the sanguine nature of the man.

It seems to be generally thought in this country, that in order to prevent relapses it is necessary to disinfect the patient's clothing, in addition to inunction of the skin. Dr. Frazer, of Dublin, states that he has seen pustular scabies return more than once in a young child, till a pair of boots were destroyed to which the virus (according to his view) was persistently adhering. But though it cannot be denied that portions of loose epidermis, or crusts containing ova, may remain in the clothes, and so that a second contagion may arise, it does not appear that this is frequently the case. Gudden says that persons often sleep in their dirty beds, after treatment, without any relapse occurring. In the General Hospital at Vienna, where 1500 patients come under treatment every year, no attempt is made to disinfect the clothes, although there is every appliance requisite for doing so. The relapses are said never to exceed one per cent. It appears to be certain that living acari never wander of their own accord into articles of clothing, as pediculi often do.—*British and Foreign Medico-Chirurgical Review.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, AUGUST 24, 1865.

The Relations of Variola to Vaccinia. Animal Vaccination.—If there is any one point in the pathology of variola and vaccinia which we have considered established beyond a question, it is the opinion that vaccinia is modified variola. That both are identical in nature, the former being the product of the latter acting upon the cow or horse, but modified by the constitution of these animals to such a degree that its introduction into the human system from such a source is entirely innocuous, while it establishes a disease so nearly allied to variola as to exclude that disease, in most cases, from any future occupation of the constitution thus occupied. It would seem, however,

that the French Academy of Medicine are not satisfied with the results obtained by experimenters heretofore, and having examined the subject *de novo*, they have come to conclusions directly opposite to those usually claimed to result from similar experiments. It is true that in rare instances the inoculation of the cow with smallpox virus, and the subsequent inoculation of the human subject with virus from the produced pustule, has led to the development of smallpox instead of the expected vaccine disease. If the results of the Academy's experiments are to be depended upon, however, the method which has been thought to furnish the readiest means of obtaining a supply of vaccine matter in an emergency, at a distance from any source of supply, namely, that of inoculating the cow with smallpox matter, and taking from the produced pustules matter for purposes of vaccination, is entirely unreliable. It is hard to explain the incongruity of the results contained in the report to the Academy and those published in medical works of acknowledged authority. It is possible that some unappreciated influence of season or diathesis interfered with the ordinary action of the smallpox virus experimented with. Certain it is that this question cannot be suffered to remain involved in any new obscurity—thrown about it by so authoritative a body as the French Academy. We hope to see before long confutation or confirmation from some other source, together with some reasonable theory to account for the impressions which have at the present time so firm a hold on professional opinion. We find the results referred to reported in the *Archives Génerales de Médecine* for July. It is there stated that at the session of the French Academy of Medicine held May 30th, M. Chauveau communicated the principal results of his experimental researches on this important subject.

These experiments, undertaken at first in consequence of a discussion in the Academy on this question, by a commission of which he was a member, with Messrs. Viennois and Meynet, are recorded in a report read to the Society of Medical Sciences of Lyons. It was an analysis of this report that M. Chauveau presented to the Academy.

The Commission has studied principally in the two principal vaccine-bearing and vaccine-generating animals—the ox and the horse—the effects of vaccine and variolous inoculation.

M. Chauveau sums up in these terms the results and conclusions of these experiments :—

1. Human variola is inoculated on the cow and horse with the same certainty as vaccinia.

2. The effects produced by inoculation of the two diseases are entirely unlike.

In the cow, variola produces merely an eruption of papules, so small that they would escape observation, if attention had not been called to their existence. Vaccinia, on the contrary, produces a vaccine eruption, the typical form of which is large and well-characterized pustules. In the horse there is also a papular eruption, without secretion or crusts, produced by variola ; but, although this may be much more severe than that of the cow, it could never be confounded with the horse-pox, so remarkable for the abundance of the secretion and the thickness of the crusts.

3. Vaccinia inoculated singly upon animals of the bovine and equine species, protects them generally from variola.

4. Variola inoculated upon these same animals generally prevents a subsequent development of vaccinia.

5. Cultivated methodically upon these same animals, that is to say, transmitted from cow to cow, or from horse to horse, variola does not approach in characters to the vaccine eruption.

At the same meeting of the Academy, Dr. Lanoix read a paper on Animal Vaccination, containing the results of his experiments since his first communication, in October last. The following are the principal results announced :—

In a first suite of re-vaccinations, done at the Lyceum of the Prince Imperiale, 180 children from 9 to 12½ years of age were re-vaccinated ; and of this number there were 63 in whom the vaccination produced good vaccine pustules.

In a second suite, 200 younger children, from 7 to 9 years of age, were vaccinated. In 20 only of them was a good vaccinia produced. In all there were 80 successful vaccinations out of the 380 re-vaccinated ; that is to say, 20 to the 100.

Two months after, Dr. Michel, Physician to the Institution of Fontenay, re-vaccinated all the children of that College with animal vaccine. Out of 400 children 76 had a good vaccine disease. Adding to the above figures 40 other re-vaccinations practised on children from 7 to 13 years of age, we have a total of 820 re-vaccinations, of which 159 were successful, or 21 to the 100.

M. Lanoix also reports the results obtained by M. Dhéré in a young girls' boarding-school, and published in the *Gazette des Hopitaux*, March 2d, 1865.

Re-vaccination in subjects from 14 to 20 years old, to the number of 71, gave 31 cases of success. In adults from 20 to 40, the number of cases of successful vaccinations was 97 to 200. There were 7 in 30 subjects, from 40 to 50 years old. Finally, of 5 persons from 50 to 60 years old, 2 were successfully re-vaccinated.

Finally, the author expresses his confidence in the results obtained by M. Negri. "As I was six months ago," he says, "and even more convinced now, I come to tell you that the transmission of vaccinia from heifer to heifer is always possible, and with such ease as to supply the needs of a large practice. That the vaccine does not grow weak, but that its activity is longer preserved, with more certainty, in its passage through the animal organism than through the human. That such vaccinations give always or almost always a positive result ; re-vaccinations an average of success superior to the average of success produced by human vaccine lymph. That vaccination with virus from the heifer is easy. That it becomes in a time of an epidemic of variola a powerful resource to combat that terrible disease, by reason of the abundance of vaccine matter which may be rapidly conveyed to all points where it may be required."

We should be glad to learn from any of our friends in this vicinity, who have been using virus from the cow, whether these deductions correspond with the results of their experience.

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110 South Main St., Providence, 8th mo. 21, 1865.

Messrs. Editors,—I notice in your Journal of the 17th inst., a synopsis of a case of "*Ovarian Tumor*," p. 62, reported by me at a

meeting of our City Association. The case was verbally and hastily reported, a few hours after making the *post-mortem* examination, and the Secretary consequently fell into some errors, which I would have corrected had I known it was to have been published. With your permission I should like now to correct one or two. The whole of the left leg was swollen and œdematous, from obstruction of the femoral vein. Dr. Burnham, of Lowell, in passing through the city, at my request, kindly visited the patient with me but a few days before she died. He thought an operation for the removal of the tumor might be undertaken with some prospect of success, but it was not attempted. The operation performed on the third (3d) of June was simply tapping the abdomen to relieve distress from distension. She sank and died the following day. The tumor was removed after death, and found to weigh about seven pounds. There were two small cysts upon the anterior surface, but the great portion of the mass was solid, and presented rather strongly the appearances of a malignant growth. From the extensive adhesions found, it is not probable that it could have been safely removed, even at a much earlier stage of its development. Very respectfully yours, G. L. Collins.

An Inch of Rain.—The last weekly return of the Registrar-General gives the following interesting information in respect to rain-fall: —"Rain fell in London to the amount of 0.43 inch, which is equivalent to 43 tons of rain per acre. The rain-fall during the last week varied from 30 tons per acre in Edinburgh to 215 tons per acre in Glasgow. An English acre consists of 6,272,640 square inches; and an inch deep of rain on an acre yields 6,272,640 cubic inches of water, which at 277·274 cubic inches to the gallon makes 22,622·5 gallons; and, as a gallon of distilled water weighs 10 lbs., the rain-fall on an acre is 226,225 lbs. avoirdupois; but 2240 lbs. are a ton, and consequently an inch deep of rain weighs 100·993 tons, or nearly 101 tons per acre. For 100th of an inch a ton of water falls per acre." If any agriculturalist were to try the experiment of distributing artificially that which nature so bountifully supplies, he would soon feel inclined to "rest and be thankful."—*Am. Jour. of Pharmacy*, from *Journal of Society of Arts.*

Temperance.—At a Temperance Convention recently held at Saratoga Springs, Drs. A. B. Palmer, N. S. Davis, and Worthington Hooker, were appointed a committee for the objects set forth in the following resolutions. We commend the subject to the attention of our readers. Anything that our profession can do toward staying the tide of drunkenness, the bane of our land, and opposed to the spirit of our free institutions, should be done with zeal and earnestness.

Resolved, That in view of the recent developments of scientific investigation in Europe and in this country, the published opinions of medical men on both continents, and especially in view of the evil effects which are often known to follow the use of alcoholic medicines, this Convention respectfully but earnestly request all engaged in this honored and influential profession to substitute other articles in the place of alcohol, so far as in their judgment it can be wisely done.

Resolved, That Profs. A. B. Palmer, N. S. Davis, and Worthington

Hooker, be a committee to convey our request to the men of their profession, and use such other means as they may deem wise and best to secure the operation of all medical men in the great cause we seek to advance.—*Med. and Surg. Reporter.*

New Hampshire Asylum for the Insane.—On the 1st of May, 1864, there were in the Asylum 217 patients—103 males, and 114 females. Since that day to the 1st of May, 1865, there have been admitted 107—59 males and 48 females, making, in all who have been under care during the year, 324—162 of each sex. The daily average residence for the whole year has been 218·4. The largest number of patients at any one time has been 226, and the smallest number 208. The average residence has been 11 above that of the preceding year, and 25 above that of the second year preceding. The number of removals during the year has been 102; of these 22—17 males and 5 females—have died; and 79—42 males and 37 females—have been discharged, leaving in the Asylum on the 1st of May, 1865, 223, of whom 103 are males, and 120 are females. Of the deaths, 17 were over 50 years of age, 10 were over 60, 7 over 70, 3 above 80, and 1, 90.

Surgeon General Barnes, whose rank defined by law is that of Brigadier General, has had the brevet of Major General conferred on him by the President for distinguished services.

Dr. George Derby, Surgeon U. S. V., now in charge of Cony Military Hospital, Augusta, Me., has been promoted by the President, through the Secretary of War, to the rank of Lieutenant-Colonel by Brevet.

Assistant Surgeon J. T. Calhoun, U. S. A., Commanding Ward General Hospital at Newark, N. J., has been breveted to a Major in the Regular Army, to date March 13th, 1865, for "faithful and meritorious services during the war."

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, August 19th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	45	49	94
Ave. mortality of corresponding weeks for ten years, 1853—1863,	52.7	52.2	104.9
Average corrected to increased population - - - -	00	00	116·03
Death of persons above 90 - - - - - - - -	0	0	0

Communications Received.—How to extinguish a fire on board a Ship at Sea or in Port.—Nitrous Oxide Gas—Is it safe for Inhaling.—Case of Melanosis.—Removal of Cataract of long standing from an aged person.

Pamphlets Received.—Records of the Twelfth and Thirteenth Annual Meetings of the Maine Medical Association, convened in Portland June 15, 1864, and June 20, 1865.

Deaths in Boston for the week ending Saturday noon, August 19th, 94. Males, 45—Females 49. Anæmia, 1—apoplexy, 1—congestion of the brain, 2—disease of the brain, 2—burns, 2—cancer, 1—cholera infantum, 19—cholera morbus, 5—consumption, 12—diarrhœa, 7—dropsy, 2—dropsy of the brain, 2—drowned, 2—dysentery, 9—typhoid fever, 2—disease of the heart, 2—infantile disease, 3—inflammation of the lungs, 4—marasmus, 2—peritonitis, 1—premature birth, 1—scrofula, 2—disease of the spine, 1—teething, 2—unknown, 6—whooping cough, 1.

Under 5 years of age, 45—between 5 and 20 years, 12—between 20 and 40 years, 14—between 40 and 60 years, 14—above 60 years, 9. Born in the United States, 68—Ireland, 24—other places, 2.

THE

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TWO CASES OF DEATH FOLLOWING ANOMALOUS NERVOUS SYMPTOMS.

[Reported to the Boston Society for Medical Improvement, July 24th, 1865, and communicated for the Boston Medical and Surgical Journal.]

BY S. L. ABBOT, M.D.

CASE I.—*Supposed Coexistent Addison's Disease.*

THIS was a case of sudden death in a young lady, preceded by unusual symptoms. She was somewhat over 30 years of age, unmarried, and I was first summoned to her at 1, A.M., in the month of December last. The account given by her friends was, that having retired at night, apparently in her usual health, except that during the evening she had seemed rather listless and had reclined most of the time on the sofa, the family were aroused at midnight by the sound of frantic screams proceeding from her chamber. Hurrying to her apartment, her sister found her in a state of the wildest excitement, screaming violently, without any apparent cause, and throwing herself about her bed. On approaching the bedside, to use her own language, "she tore her clothes off of her." To all inquiries she gave no satisfactory answer, still it did not appear that she was suffering under any definite delusion; but her violent restlessness continued, accompanied by the same frantic outcries. By the time I reached her the severity of the paroxysm had somewhat abated, but she was still far from calm. She seemed to be in a semi-delirious condition, very much excited, without any apparent cause. She recognized persons about her, and answered questions, but her answers were given in an abrupt, impatient manner, in a loud tone of voice, so that she was repeatedly rebuked by her friends for her rudeness of manner in replying to my inquiries. When asked if she had any pain anywhere, or could explain in any way her condition, she roughly answered, "No, only I feel bad." The most searching questions failed to elicit any more definite reply. The family stated that the day previous she had been as well as usual, had eaten nothing out of the common course which might have caused indigestion,

and they had not attached any importance to her condition during the evening. She thought she had "taken a little cold."

It was learned that the patient had been taking, by the advice of her physician, for the past three months, Fowler's solution of arsenic, in three-drop doses, three times daily, for a discoloration of the skin which had given her much annoyance. I had not been particularly struck with this until my attention was called to it, as the lady was previously a stranger to me. The complexion was quite sallow, or brownish, uniform in tint on the face and neck and so much of the arms as was seen, and the hands. Subsequently I learned, from her physician, that this discoloration had existed for a year past, and was pretty general over the body, presenting a striking contrast to her healthy complexion, which was quite fair and ruddy. He had suspected Addison's disease from the first, and had been looking for grave symptoms for some time past. The patient had been at times dyspeptic, of late years, but not specially so of late. At her urgent solicitation, he had consented to her taking the arsenic, which had been recommended by a friend. None of the poisonous symptoms usually caused by this drug had manifested themselves, and he had thought the discoloration was somewhat less under its use. A remarkable circumstance connected with this symptom, if properly due to Addison's disease, was, that there had been no decided failure of strength. The patient was a person of great energy, much given to long walks, and thought nothing of a walk of seven or eight miles, up to the day of her death.

The condition of the patient, when I was called to her, seemed much like hysteria; the pulse was very little excited and there was no marked heat of skin; and as there was fluid extract of valerian in the house, I advised its administration, and at the end of an hour left her, somewhat less excited than on my arrival. At 7, A.M., I was summoned in haste, with the message that she was dying. On reaching the house, I was informed that she took a dose of the valerian and soon after fell asleep. Her manner of sleeping at last alarmed her friends, and they attempted to arouse her, but were unable to do so.

The patient was lying in a somewhat constrained position, with loud, stertorous breathing. Pulse 105, full and occasionally intermitting. Pupils acting fairly under the stimulus of light. Skin somewhat warmer than at previous visit—not remarkably so. On shaking her with some violence and calling loudly to her, she raised her lids heavily, without fully opening her eyes, but did not speak, and at once lapsed again into profound slumber. She resembled very much a person under the influence of a strong narcotic. Changing the position of the head relieved somewhat the stertor of her breathing. A consultation with her physician was held two hours after, but it was evident that the case was beyond the reach of remedies. At this time the pulse had fallen to 90, and was less full. She gradu-

ally sunk, and died at 3, P.M., about fifteen hours after the attack commenced. No autopsy was permitted.

The cause of death in this case is certainly most mysterious. If it is attributable to Addison's disease alone, the manner of death differs most essentially from the phenomena usually attending its closing scenes. There had been none of the remarkable prostration of strength usually accompanying this grave malady. Was it due to cerebral congestion supervening upon this complaint, ending in an apoplectic compression of the brain? If so, it is remarkable that at the commencement of the attack there were no subjective symptoms referable to the head. There was no headache, no marked heat of head, no convulsions, no local uneasiness anywhere. Uræmia may be suspected as the cause of death, and the cerebral symptoms were certainly in keeping with this supposition; the previous state of the urine was not learned, but there had been none of the other common symptoms of Bright's disease. Can the protracted use of Fowler's solution be chargeable with the death of the patient? If this is the case, the symptoms were certainly quite different from those usually produced by poisonous doses of this drug. Again, it might be suspected that death was caused by some narcotic. The circumstances seem to preclude the possibility of such a cause. The medicine administered was taken from a phial already in the house, a part of the contents of which had been used by the patient on previous occasions, and presented the unmistakable physical properties of a preparation of valerian. Finally, it may be asked, may an attack of hysteria, or of reflex cerebral excitement, lead to fatal coma? It is greatly to be regretted that the failure to obtain an autopsy leaves the answer to all these important questions shrouded in impenetrable mystery.

Case II.—*Death following Gastric Symptoms, with supervention of Cerebral Symptoms.*

This was a case of nervous disease in a young woman, which in some of its features reminded me of the case above reported. The patient was about 22 years of age, and like the patient in that case was a stranger to me until I was summoned to her in her last sickness. This was on the 21st of June, at 10, P.M. She was a slender, delicate-looking person, with dark hair and eyes, and apparently of decidedly nervous temperament. She was complaining greatly of a sense of distress and soreness rather than pain, extending from one hypochondrium to the other, but mostly on the right, where there was great tenderness on pressure; this was accompanied by an overpowering sense of weakness. In fact, complaint was made more of the weakness than the other symptoms. Her friends stated that she had formerly been a stout, vigorous girl, but had been a good deal debilitated by excessive application at school in Nova Scotia, and had come to Boston two years since in search of improv-

ed health. Some of her symptoms had amended; severe dysmenorrhœa, from which she always suffered more or less, had disappeared, but she had lost considerable flesh since the time of her close application to her studies. She had never fully recovered her health, and was liable to slight attacks of indisposition. She had habitually suffered from attacks of intense headache, but these had been much less frequent during her residence in Boston. At times, also, the catamenia had been delayed.

On the 4th of the month the catamenia appeared, but were suppressed after showing but a slight trace. The suppression was attributed by her friends to fatigue, and perhaps a chill from washing clothes, a labor which she voluntarily assumed and against their remonstrances. The menses reappeared, however, at the end of a week, and went through their usual course. On the 15th of the month she became very much exhausted by over-exertion in household labor. She lost her appetite, and on the 18th began to complain of pain in the right hypochondrium, to which she had been subject at times. Having retired to bed early in the evening, she ate a few strawberries which her brother brought her before the usual hour for bedtime, and on the next morning ate a few more. No special discomfort followed, attributable to them. Anorexia continued, and as the bowels had not been moved for several days, on the 20th she took ol. ricini, f ʒ i., and tr. rhei c., f ʒ ij., which had a moderate effect. Her other symptoms continuing, I was summoned on the evening of the 21st. There was no marked excitement of the pulse or feverish heat of the skin—the local distress and weakness, above mentioned, were the main symptoms. A sinapism was directed to be applied to the seat of pain, and she was ordered to take the following dose every hour until relieved: Morphiæ sulph. sol., ♏ xl.; sp. etheris sulph. c., ♏ v.; aq. menth. piperitæ, ♏ xv. The medicine excited vomiting, but the patient was able to retain three doses, and on the following morning expressed herself as greatly relieved of the pain and soreness, but nausea continued, with a very urgent sense of weakness as before. The skin was sallow and the conjunctivæ had a yellowish tinge. ℞. Hydrarg. cum cretâ, gr. v., magnesiæ calc., ʒ ss., to be repeated in an hour if not retained on the stomach.

22d, P.M.—Patient had vomited both doses. She was directed to take hydrarg. cum. cretâ, gr. ss., to be laid dry upon the tongue, and swallowed, if necessary, with a sip of water, to be repeated every hour until the nausea was relieved or there was some effect upon the bowels.

A messenger from the patient toward midnight reported frequent vomiting, with the supervention of severe general abdominal pain. A sinapism to cover the whole abdomen was directed, with morph. sulph., gr. 1-6, to be laid dry on the tongue every hour until relieved.

23d.—Abdominal pain relieved, and the stomach considerably

more quiet, after retaining three doses of the morphia. There was great complaint of acid taste in the mouth, and frequent acid eructations. Very little nourishment had been taken for two days, and there was decided aversion to food. The patient was much annoyed by a troublesome itching at times on various parts of the body and extremities, which had begun the day previous. This was said by her friends to be accompanied in some places by a slight, temporary, papular elevation of the skin in small points without redness; in other places the pruritus was unaccompanied by any apparent change of the surface. The patient was heavy from the opiates, although she had not slept, she said, and the distressing sense of weakness continued. She was ordered to take iced brandy and water, iced milk in small quantities, and lime water for the acid eructations, *pro re natâ*.

24th.—Had slept somewhat during the night, but had been quite restless; the symptoms of the previous day had continued throughout the day. On attempting to arouse her this morning she seemed to be unconscious. At the time of visit the skin was cool, the pulse very little above the normal standard, of moderate strength. The patient could not be made to speak, but lay as if asleep. On raising the lids the pupils were found to be sensitive to the light, although acting somewhat less promptly than natural. The urine was passed involuntarily. The symptoms being of an anomalous character, suggesting very strongly hysteria, stimulants were directed to be continued, with beef tea and iced milk. In the middle of the forenoon the friends were much alarmed by what they called a "faint turn," from which she rallied on the administration of stimulants, which were however given with very great difficulty, and could be got down only in small quantities. The state of unconsciousness continued, and towards evening strong sinapisms were applied to the calves. The application of these was followed shortly by violent paroxysms of delirium, the patient throwing herself violently about the bed every few minutes and uttering the most frantic screams. Tincture of assafœtida and aromatic spirits of ammonia were given, and the stimulants and beef tea were continued by teaspoonfuls as the opportunity offered, but with great difficulty, and very little was swallowed; at 10, P.M., the patient became quiet.

24th, Midnight.—Summoned in haste and found the patient insensible, breathing heavily, at intervals of about five minutes the breathing becoming rapid, spasmodic, loud and stertorous, accompanied by general rigidity of the whole body and limbs. The head was intensely hot, and the pulse was greatly excited. Ice water was applied to the head and sulphuric ether was administered by inhalation, with the effect to check the general muscular spasm, but the breathing continued as before, with frequent spasmodic exacerbations. The patient was left at 2, A.M., directions having been given to employ the anæsthetic as occasion might require throughout the night.

25th, 5, A.M.—The patient had remained in the same condition throughout the night; there had been no general spasms, and the convulsive character of the breathing had gradually diminished. The head was much less hot, but the general surface was quite hot and the skin was bathed in profuse perspiration. Pulse small, feeble, very quick. Pupils much dilated and insensible to light. The patient gradually sunk, and died at 10½, A.M. Dr. Charles Ware saw the patient in consultation at 7, A.M., but it was obvious that she was moribund. An autopsy could not be obtained, although most urgently requested.

After this young lady's death, it was learned from her friends that for the previous two years she had complained at times of pain in the region of the kidneys, accompanied by a turbid condition of the urine, which was of a milky appearance, and deposited, on standing, a whitish sediment. The quantity of urine at these times was not noticed to be abnormal, but the desire to pass it was noticeably less frequent than at other times. The patient suffered from almost constant leucorrhœa. Shortly before her last sickness, slight œdema of the feet had been noticed in the evening, making it difficult for her to draw on her boots. She had had no treatment for any of these symptoms. The urine at the commencement of the fatal attack was not seen, but was said to be turbid, reddish, of natural quantity; after the grave symptoms came on it was passed involuntarily, and could not be obtained for examination.

The same mystery hangs over this case as the first. The fatal nervous symptoms in both came on in an unusual manner, seeming like the result of reflex action, but passing into a condition like that produced by uræmia. The question also suggests itself, did purely reflex cerebral symptoms in these cases lead to fatal exhaustion and serous effusion within the cranium, as we see them occurring in young children after repeated convulsions of a reflex character? The failure to obtain an autopsy in either of these cases leaves them most unsatisfactorily incomplete. They are given in the hope that they may lead to discussion, or may be elucidated by the report of similar cases, of which the record may be more complete.

REMOVAL OF A CATARACT OF EIGHTY-THREE YEARS STANDING, FROM A MAN NINETY-THREE YEARS OLD.

By Henry W. Williams, M.D., Ophthalmic Surgeon of the City Hospital.

Mr. W., of Vineland, N. J., was struck by a piece of stone in the right eye, when only ten years old; causing the formation of cataract.

When seen, on the 7th July, 1865, the field of the pupil was occupied by the capsule of the lens, most of the lenticular substance having been absorbed.

His left eye began to fail five years since, and its vision has become very imperfect. On examination with the ophthalmoscope the optic disc is seen to be irregular in its outline and much injected. Ill-defined whitish patches are seen upon the retina about the entrance of the optic nerve.

The other eye being in so unfavorable a condition, an operation was advised for the removal of the cataract from the right eye. This was done by puncturing the cornea with a broad needle, and introducing the canula forceps, with which the capsular cataract was seized and most of it withdrawn, leaving the pupil clear. He could count my fingers immediately after the operation.

The patient had a very little pain on the day succeeding the operation, but there was scarcely any injection of the eye, and all went on favorably. He returned home on the 16th August, at which time he could see large objects and tell the time by a watch with a glass of $4\frac{1}{2}$ inches radius, though he could not yet read ordinary print, in consequence of an attack of conjunctivitis in both eyes from exposure to cold; making it necessary to defer the choice of reading glasses.

I did not consider the great age of the patient as contra-indicating an operation; as I have many times operated for cataract on those between eighty and ninety, and with invariable success. The point of most interest in this case, was the conservation of power in the retina and optic nerve, notwithstanding eighty-three years of disuse.

ON A NEW REMEDY FOR DYSENTERY.

By William Kerr, Surgeon, &c. &c.

Twelve years ago, an accidental circumstance led me to attempt an improvement in the treatment of dysentery. Commencing with camphor and henbane, added to opium, I experimented on every officinal narcotic, coming to the conclusion, that of these the most efficient combination was one of opium, henbane, hemlock, stramonium and digitalis. I had cause to be better satisfied with this than with any previous combination; but from time to time failures or tardy success induced the conclusion that something was still wanting—that something, if to be found at all, was therefore to be discovered in plants not yet admitted into the Pharmacopœias. After a long search, Cicuta maculata, Sium lineare, and Conio-selinum canadense, indigenous to the swamps and woods of Canada, supplied the deficiency better than any others I happened to try. Sium lineare supplanted hemlock (Conium maculatum), on account of the combination containing the latter occasionally producing pain in the bowels and failing, while that with Sium lineare gave relief; and dulcamara supplanted henbane, as experience showed it to be better adapted to act beneficially along with the other members of the

combination. Its constituents when the investigation was concluded were as follows:—four officinal, viz., opium, stramonium, dulcamara, digitalis; three non-officinal, Sium lineare, Cicuta maculata, Conioselinum canadense. All are more or less narcotic; and digitalis, dulcamara, and Sium lineare are also diuretic. So many are necessary evidently from each possessing some peculiarity in the way in which it affects the system: the combined effect of these peculiarities being required to combat the disease.

Without opium the combination is slightly aperient, improves appetite, promotes sleep, and, according to experience gained in dysentery and other diseases, heals ulceration of the mucous membrane. In dysentery, opium is necessary apparently to check the frequent motions of the bowels, the strictly curative power depending chiefly, if not altogether, on the other ingredients. In infants generally, and also in a few adults, digitalis does not act favorably. In such instances I have substituted squills with great benefit. Adults generally require the combination with digitalis; of a very few infants the same may be said; and to many adults the combination with digitalis, or that with squills, may be given indifferently. Excepting opium, the part employed is the leaf. Digitalis and squills are combined in the proportion of half a part each—all the others in that of one part. For infants, opium is reduced to a half part. The usual dose to adults is six and a half grains, digitalis or squills being each half a grain, and all the others one grain each.

Between five and six years were spent in determining the components. Beginning with three, I never afterwards, either in adding or subtracting, changed more than one plant, till I had as fully as lay in my power ascertained the result of each change. In this manner I have experimented on thirty-two plants or their products. I have pulled down the combination and built it up again, and thus done my best to ascertain the necessity for each component. For upwards of seven years the combination has been used with very great success; but as my own experience may be suspected of being biassed, I shall confine myself to the reports of others.

Dr. Brown, of Berlin, C. W., had a very severe attack, of which he published an account in the *Montreal Medical Chronicle* for December, 1858.

Of this paper the following is a copy, slightly abridged:—"In August last I was seized with epidemic dysentery. The usual remedies were promptly administered--opium, the quantity of which speedily rose to twenty-one and even twenty-four grains daily, together with mercury, acetate of lead, and ipecacuanha, but no amendment took place. I vomited incessantly, and, though tormented with thirst, could retain no fluid. In my case the effect of large doses of opium was prostrating and overpowering. I did not sleep, but could scarcely be said to be awake, except to the

consciousness of severe pain, agonizing tenesmus, and frequent vomiting. I had been ten days ill, nature was sinking, collapse was to be feared, when Dr. Kerr visited me. He immediately gave three and a half grains, or half a grain of each of the seven ingredients." (The recipe is here given by Dr. B.)

"I was very restless from a sensation of sinking and severe pain. In half an hour, after dosing a few minutes, I became aware of a great change. I could lie quiet; the distressing tenesmus was less, pain in the body and limbs less severe, the sensation of sinking relieved, a glow of warmth was supplanting the cold of threatened collapse, and an inclination to sleep, not before experienced during my illness, was stealing over me. The first thought was amazement at the change, then a faint recollection of a new medicine crossed my mind, and I resigned myself to its influence. I was immediately asleep, and for an hour and a half had a comfortable and refreshing sleep, unaccompanied, comparatively speaking, with sensorial disturbance. When I awoke all the symptoms were relieved. Seven grains were given every six hours; but the quantity of digitalis being too great, this drug was reduced from a full to a half proportion, making each dose six and a half grains, which were given every four hours.* I spent twenty-four hours almost wholly in sleep; calls to rise were still frequent, but the tenesmus was less severe, and, though I retched a few times, vomiting ceased. In a few days appetite began to return.

"During twelve years' practice, I never in the treatment of dysentery met with a narcotic to be compared with Dr. Kerr's combination, in relieving general irritability, pain, and, above all, nausea and vomiting. It produces a wonderful degree of comfort, unattended by sensorial disturbance. From thirty minutes after the first dose was taken my suffering was comparatively nothing. Little hope was entertained of my recovery previous to the first dose, but became sanguine before I had taken the third."† Dr. Bingham, Dr. Brown's medical attendant, in a supplement, vouches for the accuracy of the narrative, and relates six confirmatory cases from his own experience.

Dr. Bingham, supplied with medicine by me, treated successfully the sporadic cases which occurred in the following years:—In August, 1862, he, with Dr. Bell, by this time his partner, applied to me, making the following statement:—Dysentery had broken out epidemically in their locality, but not having any of my medicine, they had treated it with the usual remedies; a woman had died the preceding evening, her husband was dangerously ill, and other two were apparently dying. Furnished with a supply, they hastened to

* Prior to this all the ingredients were equal.

† The possibility of any future report from Dr. Brown was cut off by his accidental death a few months afterwards.

their patients. The husband just mentioned, though previously ill for five days, was relieved in less than an hour, and had a rapid recovery. One of those believed to be dying recovered readily, though upwards of seventy years of age; the other died, time to administer only a single dose being afforded. During the remainder of the epidemic there was not a death, though, judging from the severity of the attacks, six or seven would have proved fatal under the ordinary treatment. In the autumn of 1863, dysentery was again epidemic at Ayr, C. W., where Drs. Bell and Bingham resided. Without delay they applied to me for medicine, and treated successfully every case; while the only other medical gentleman in the same village adhered to the ordinary treatment, and out of a smaller number of patients lost five by death.

Dr. Mackintosh, of Hamilton, C. W., has employed the combination in dysentery since 1861, and in all cases with success. From his notes I give the following, on account of the epidemic and generally severe character of the attacks:—

"1864, 15th July.—A child, four years of age, seized two days ago, bloody stools every half hour, accompanied with vomiting and severe pain. Applied hot fomentations, and gave three grains of the squill combination with opium every four hours. These were speedily followed by relief; the child had a pretty good night, and on the 19th is reported quite well.

"17th July.—A girl in the same house, nine years of age, was seized during the night with severe dysentery. Applied hot fomentations, and gave five grains of the digitalis combination with opium every three hours. Immediate relief followed, and next day she was convalescent. Six doses in all were given.

"22d July.—A boy, seven years of age, seized yesterday, and now severely affected. Gave three grains every three hours, and by evening he was much relieved. Nine doses completed the cure.

"6th August.—A man, aged thirty, attacked during the night with rigors and vomiting, followed by dysentery. In the morning seven grains were given every three hours. In two days he was quite well.

"12th August.—A man, aged sixty-four; bloody motions every half hour, with nausea. Same doses given as to last patient; next day almost well.

"15th August.—A woman, aged fifty-six, during the night was attacked with severe dysentery. Same doses given. By evening was much better; and by the third day complained merely of weakness.

"17th August.—A woman, suddenly seized with very severe dysentery, visited shortly after; she was then cold and faint, and stools passed without control. Gave seven grains of the digitalis combination, with one fourth of a grain of morphia (instead of opium),

every two hours. After the third dose relief was so great that morphia was altogether omitted, but seven grains of the other combination were continued thrice a day.

"19th.—Almost well."

Dr. Philip, of Galt, late assistant surgeon H.M. 18th Regiment, has furnished me with the following statement:—"Your remedy was administered by me in six severe, besides a number of slighter cases of dysentery during the autumn of 1862. Relief was uniformly obtained after one or two doses, and recovery completed within a few days. One of the cases was characterized by profuse sanguineous discharge, and, occurring in a delicate female, would probably have proved fatal but for the timely administration of this medicine. In contrasting the success of treatment in these instances with the fruitless and unfortunate attempts made by myself and others at relief in the severe dysentery of the Crimea, it is impossible not to be struck with the readiness and efficacy of this remedy. Every known system of treatment, I believe, was tried, and the medical history of the campaign shows with how little benefit. Many of the cases which in the Crimea ended fatally were not apparently of a more severe character than some of those which yielded rapidly to your medicine."

Dr. Merritt, who at the time the following occurred was chief of the Medical Department of the Confederate Army of the Mississippi, thus writes to me:—"In August, 1863, when in charge of Camp Jackson, I came into possession of a quantity of your medicine for dysentery. The rapidity of relief and of cure was exceedingly striking. The men were on their feet in a few days, and in the worst cases I did not give more than eight doses of six grains each. My supply lasted ten days, and was administered to about sixty patients, only one of whom died. For some time before I obtained the medicine the deaths ranged from one to three daily, and as soon as it was all expended the mortality resumed the same rate."

A child of the Rev. Mr. Robb, Calabar, Western Africa, in the latter part of July, 1863, was seized with dysentery. At this time the favorite treatment at the mission was large doses of ipecacuan; but this illness resisted every prescription of Dr. Hewan, the medical attendant. By the middle of August the child became so reduced, and death so impressed on the visage, that recovery was regarded by all to be hopeless. At this juncture the parents recollected a packet of the combination which I had given to them. After the second dose the child awoke from a refreshing sleep, easy and tranquil, and the medicine being continued, recovery went on rapidly, without a single untoward symptom. A second attack of dysentery, a few months afterwards, was stopped in a single day. A native African was cured of what threatened to be a severe illness by ten doses.

Fifteen medical men besides myself have used this combination

in dysentery; it has been given in the warm region of California, amid the privations and discomforts of a camp in the hot summer of the Southern States, at sea on the Atlantic, in the tropical and pestilential climate of Calabar, and there is a remarkable uniformity in the testimony of all. Relief generally in an hour, restoration to health in a few days, and the great majority cured within a week. A few cases were a little tedious, and a still smaller number lingered for three or four weeks; none lapsed into chronic dysentery; and out of about *four to five hundred patients*, though several of the attacks were very severe, as severe as some of the reporters had ever witnessed, *only four died.* One of these was a delicate child; the second, an infant on whom the medical attendant had previously exhausted all the ordinary medicines; and the third and fourth have not been specially reported to me. I have been told of some instances, and a few have occurred in my own practice, of that generally fatal variety of dysentery characterized by profuse bloody discharges, usually attended with severe pain, all of whom were cured without difficulty. The combination fails in chronic diarrhœa, possibly because this disease is usually unaccompanied by lesion of the mucous membrane. I have not seen or had reported to me any disagreeable effect from this remedy, though, judging from the character of its constituents, such is possible, were the doses unreasonably large. The *medicinal* power is certainly greatly increased by the combination, but not the *poisonous.* Relief speedy and great of pain, far sounder and more refreshing sleep than that from opium, and cessation of discharges, are the usual effects. The nearly uniform success has not given either my correspondents or myself opportunities of trying the treatment by large doses of ipecacuan.

In the course of my experience, several persons afflicted with chronic dysentery have been restored to health—some by the combination containing opium, others by that without. Dr. Ogden, lecturer on materia medica, Toronto, tells me of a case of acute dysentery where, from idiosyncrasy, opium disagreed, but which was speedily cured by the combination, leaving out this drug.

Cases of cholera infantum have been reported to me by medical friends as treated successfully by the combination containing opium. Of summer cholera I select the following on account of its severity. A young man was seized during the night, and visited by Dr. Bingham in the morning. At this time he was violently cramped, skin cold and clammy, voice husky, and pulse feeble. Eight grains of the combination containing opium were given; from this time he vomited no more, a glow of warmth (as in Dr. Brown's case of dysentery) supplanted the cold of threatened collapse, and cramps rapidly abated in severity, though all day he had muscular twitchings. Four more doses completed the cure. Summer cholera has been for some years a rare disease, but all treated by my medical correspondents or myself have readily recovered.

In conclusion, I beg to suggest the medicine now recommended as worthy of a trial in Asiatic cholera. If a remedy for this disease is ever to be found, it clearly must be one which shall take almost immediate effect.—*Edinburgh Medical Journal.*

Doon Grange, near Galt, Canada West, 5th April, 1865.

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

JULY 10th.—*Monstrosity.*—Dr. JACKSON reported the case of a five months' fœtus that he had recently examined. The kidneys were wanting; the renal capsules being fully if not largely developed, and in their usual situation. A similar specimen is in the Society's Cabinet. Dr. J. remarked that these two cases showed not merely the well-established fact of the independence of these organs; but, the subjects being plump and well developed, however malformed, they showed that the kidneys are comparatively unimportant in intra-uterine life, though we know very well how actively they often secrete. The bladder would not have contained more than two drops of fluid.

The anus was imperforate, and the rectum opened freely into the bladder, such as it was; an opening which, as Dr. J. has often remarked to the Society, he has always found in ordinary cases of imperforate anus in the male subject. One hypogastric artery was wanting, as is not very unfrequently the case in monstrosities; otherwise the fœtus, internally, was well formed.

The pelvis and each of the extremities were malformed. The right hand was flexed to an acute angle upon the fore-arm, and the left fore-arm to a right angle upon the arm; but, though they could not be in the slightest degree any further extended, the muscles yielded completely as cadaveric change came on. The pelvis was greatly distorted and laterally compressed; sacrum largely open posteriorly, as in spina bifida, and the coccyx turned sharply backwards upon itself. But the most remarkable malformation was an absence of the upper ramus of the pubes upon the left side; the foramen ovale being thus converted into a deep notch or fissure. The right acetabulum was very shallow, and the capsular ligament being consequently elongated, there was great mobility of the joint, and a partial dislocation was very easily accomplished and reduced; the most normal position of the limb seeming to be a state of eversion, with a marked tension of one or more of the long muscles upon the front of the thigh. The left acetabulum was so shallow that it could hardly be said to exist; and, instead of being in its usual place, it was situated very near to the inferior spinous process of the ilium. The leg was so strongly curved upon itself that the sole of the foot lay in close apposition to the inner and lower surface of the thigh. The patella was wanting. The fibula was broad and stout, and by measurement about one fourth shorter than that of the other leg. In the place of the tibia there was only the lower cartilaginous epiphysis, and this was connected by a short fibrous band with the inner condyle of the femur.

The lower extremities had been dissected and prepared by Dr. Hodges, and the specimen, which was exhibited and described by him, is to be preserved in the Cabinet of Harvard Medical School.

Dr. J. spoke of the phimosis that existed as being the normal condition of the fœtus, and said that he should not have referred to it if it had not been remarked upon, when the specimen was handed to him, as one of the malformations. He also spoke of the absence of the posterior fontanelles as another normal condition of the fœtus during the latter months of pregnancy; the age of this subject, however, being only about five months. He had examined the cranium very carefully; and the specimen, having only been dried within a few days, will be shown at the next meeting.

July 10th.—*Effectual Remedy for Prolapsus Recti.*—Dr. Abbot said that he had found that the very annoying complaint, prolapsus of the rectum in adults, could be relieved by a very simple process. Many forms of apparatus, bandages, dumb-bell plugs for the anus, &c., had been recommended and to some extent worn by those unfortunate victims of this complaint who could not bring themselves to the chances of the operation for removing the prolapsed part, an operation in unskilful hands by no means certain in its results or wholly unattended with danger. For the last four years he had often found the following simple method of treatment to furnish a complete palliative to this troublesome affection. After the bowels are evacuated, a strip of isinglass plaster is to be applied lengthwise between the nates completely across the anus and extending a little beyond it each way. Dr. Abbot preferred Robbins's adhesive plaster for this purpose, as being spread on cotton cloth it is more substantial than those preparations of similar plasters spread on silk. The prolapsed rectum is to be reduced, the nates slightly separated, and the plaster is to be applied as directed, and held for a few moments until it adheres firmly. When properly adjusted it will in most instances remain until the next evacuation of the bowels, keeping up the intestine perfectly, so that the wearer is entirely unconscious of his infirmity. Occasionally, in violent exercise or during the hottest weather, it may become displaced and may require renewal. Under such circumstances it is well to apply a second strip of plaster of the same size over the first, to give it more body and firmness. The plaster need only be of the width of the space between the nates and long enough to fairly cross the sphincter; a piece from an inch and a half to two inches long, by three quarters of an inch to an inch wide, is usually large enough. If too long or too wide, the ends or edges are apt to get turned up in walking and the plaster to be displaced.

In these cases the prolapsus seems due in the main to a simple mechanical action produced by a fold of the mucous membrane or a hæmorrhoid, which, getting into the anus, acts as a wedge and opens the way for a greater or less protrusion, which becomes excoriated and irritated, causing unceasing discomfort to the patient. A muscular weakness of the sphincter is probably one of the conditions, as in many of them the intestine only comes down when the patient is fatigued and has been long on his feet. The sphincter is completely reinforced by the simple process described.

One of the patients, a lady, relieved by this method, declared that

the relief was so complete that she should not have known by her sensations that she was suffering from this infirmity. She had been obliged for years, when using any exercise, to wear an india-rubber ring within the anus, to distend the rectum so that it might not come down. Occasionally the ring slipped out, exposing her to no little annoyance and discomfort.

A second patient, also a lady, a confirmed invalid, a victim to chronic rheumatic arthritis, compelled to pass her weary days in a chair, after suffering positive torture from the tenderness and excoriation of a prolapsed rectum for months, was entirely relieved by the method above described. It seemed to operate, as she said, "like magic."

A third case was that of a lady who had suffered from this complaint fifty years, and who always wore a bandage, to support the bowel as much as possible. She found similar benefit from this simple application. In spite of the thick bandage around the hips and between the thighs, the intestine protruded in a tumor as large as a hen's egg, was constantly excoriated, bleeding and tender, pouring out abundant slimy mucus. When the patient stood up after the application of the plaster, the bandage having been entirely removed, she exclaimed, "Why, I should not know there was anything the matter with me!"

It remains only to add that the plaster is as easily removed as it is applied, by stripping it off from one edge to the other. A plaster of isinglass or a similar substance, requiring only to be moistened to make it adhesive, is obviously better than one made of pitch or any substance requiring the action of heat. It is highly probable that a persevering application of astringents to the prolapsing bowel, in connection with this method of keeping it within the anus, would in time effect a radical cure in some of these cases.

July 10th.—*Bromide of Potass in Epilepsy.*—Dr. Abbot mentioned the case of a gentleman who for the past ten years had suffered from attacks of epilepsy, in which he had employed this remedy with the best effect. The fits were of great severity, usually coming on at intervals of about a fortnight of late, sometimes two or three occurring in twenty-four hours. The patient was of such a peculiar disposition, and so uncomfortably situated in his domestic arrangements, that he could not be relied on to follow out any system of diet persistently. He was advised, on the 15th of March last, to try the bromide of potass in twenty-grain doses three times a day. At the end of two weeks he discontinued the remedy of his own accord, and had one or two fits. In a few days he was induced to resume it, and he has faithfully continued its use since without a single recurrence of the fits. He has taken about forty grains twice daily. On two occasions he has had very slight mental confusion without loss of consciousness. During this time his diet has not been specially restricted, except that it is simple, as it always has been. He is unconscious of any unpleasant effect from the remedy except a very copious papular eruption on his body. [At the time of writing this, Aug. 24th, there has been no return of the fits.]

July 10th.—*Double Pneumonia; Recovery.*—Dr. Parks reported the case.

The patient was a lady 67 years old, of strong constitution, but

somewhat run down by over-exertion. She had not been exposed to cold. The attack began with chills and fainting. On the fourth day nearly the whole of the right lung was solidified posteriorly. The same day rales were heard in the left lung, which also gave the physical signs of hepatization throughout nearly its entire posterior portion on the sixth day. The respiration continued vesicular at the upper part of both lungs in front, through the case. The patient was delirious on the third day. On the tenth day the patient was mending, and in two weeks she was out of danger. The expectoration at first was bloody, afterwards dirty rather than rusty, and then became white and frothy. The *crepitus redux* manifested itself in due course. The treatment was expectant—opiates at the outset, diet nourishing, with stimulants.

July 24th.—*Hydro-nephrosis.*—Dr. Jackson showed the specimen, having received it from Dr. J. C. Neilson, of Charlestown. If inflated, the kidney would have been not very far from the usual size. No trace of renal substance was visible to the naked eye; though upon the inner surface some slight irregularities were seen, being all that remained of the infundibula. The ureter arose abruptly from the cyst, was proved to be pervious throughout, and was rather smaller than natural.

Dr. N. found the cyst to contain about a wine-glassful of liquid that resembled urine; and the other, or left kidney, to be about three times its usual size. The patient, a healthy woman, 66 years of age, had "never suffered from disease in any form," so far as Dr. N. could learn, and died at last from strangulated hernia.

Dr. J. remarked that though this disease of the kidney is by no means rare, he did not remember to have ever before examined one in which some trace of the substance of the organ was not to be seen. The enlargement of the other organ is what we should expect to find, and it is said, in fact, to be often if not generally found; Dr. J. has met with it, but scarcely ever. The cause of the dilatation in these cases Dr. J. remarked upon; it may be a mechanical obstacle to the flow of the urine, depending upon some one of the many diseases to which the pelvic organs are liable; but in a large proportion of cases, so far as he has seen, no cause whatever could be assigned. The one above reported belongs to this last class; for though Dr. N. does not state whether there was or not any pelvic disease, it may be inferred that if there had been any such it could have had no influence as a cause of dilatation of the kidney, as the dilatation did not extend to the ureter; and the other ureter, moreover, it may be presumed, was of natural size.

July 24th.—*Diphtheria.*—Dr. W. E. Townsend reported the following. On Friday, July 14th, he was called to a house on the seashore at Manchester, Mass., to see a child 2 years and 2 months old. He was told that on the Sunday preceding, the child, whilst playing on the beach, and apparently in full health, complained of being tired and sleepy, and on being taken home began to vomit; this continued for a day or two, giving no alarm, as it was thought to be a febrile attack only. A physician in the neighborhood was then called in, who pronounced the case diphtheria. When Dr. T. saw the child, the throat was greatly swollen externally; there was a free discharge rom the nose; the tonsils were swollen, and covered with a white,

pasty substance ; there was great difficulty in swallowing, and everything in the way of medicine or food was at once rejected. The child had been treated with chlorate of potash and muriate of iron, given internally and applied with a brush to the tonsils, a poultice of oatmeal and whiskey around the throat, and all the broth and stimulants that he could be induced to take. Dr. T. advised beef-tea injections, which were given, but the patient died that night. All the other children appeared well ; two of them, a boy of 8 and a girl of 10, slept in an inner chamber, opening from the one in which the child died.

On Sunday afternoon, Dr. Townsend was called to the South End, and found the whole family returned to town that afternoon, in carriages, and that the two children abovementioned were sick, the girl much the worse. They had been taken on Friday night with vomiting and sore throat. Ice and chlorate of potash had been used freely. The girl was much exhausted by loss of sleep, the journey, and constant vomiting. Dr. T. prescribed an eighth of a grain of morphia in hopes of quieting the vomiting and giving her some rest. Directions were also given for stimulants to be used as soon as the stomach would bear them. After taking the medicine she seemed more comfortable, and slept during the first part of the night. At 2, A.M., she started up, asked for water, which she drank eagerly, laid down, and died instantly. The boy, a smart, intelligent little fellow, soon learned to gargle his throat, which he did persistently every hour when awake, with a solution of chlorate of potash (a drachm to eight ozs.), and immediately afterwards swallowed a mouthful of the same. He also eat ice, and took ten drops of tincture of muriate of iron every three hours. Beef tea and milk punch were also given freely. His case commenced with a white patch on the right tonsil, which, on the next day, extended to the other side. The glands were not much swollen externally, he had no discharge from the nose, nor did he vomit after the second day. His case progressed favorably, and by Saturday his throat was clear, and he felt well.

On Tuesday night, one of the three other children (who had been kept apart from the sick, and who all slept in one room, in the upper part of the house) was taken with vomiting, and complained of his throat. This child was 4 years and 2 months old, and had always large tonsils. On examination of his throat, the next morning, Dr. Townsend found it apparently nearly filled with the swollen tonsils, but no appearance of lymph was seen. He hoped this case would prove only to be a case of sorethroat ; and, in fact, the child seemed to do well under the same treatment as the last, with the exception of the gargling, which he was not old enough to practise. But on Thursday lymph began to show itself on the tonsils, and he refused to swallow ; still there was no swelling of the external glands, but a discharge from the nose commenced. On Friday morning the glands were somewhat swollen, and he appeared more restless. By noon he re-commenced to take drinks, and at the evening visit drank nearly a wineglass of wine and water, easily. He also took broth. His breathing, throughout, as in all the other cases, was good ; he looked badly, however, in the face, and died that night. The other two children have not been attacked ; neither have four adults who were in the family had any sorethroat, though a neighbor who was kind enough

to come in and assist the afflicted parents had a bad sorethroat for a day or two afterwards, which yielded readily to remedies.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, AUGUST 31, 1865.

Social Science.—We have always considered it one of the first duties of our office to awaken an interest on the part of our readers in all questions of social reform, and have constantly endeavored to expose and correct, as far as possible, those faults in our common life which particularly affect the sanitary condition of our race. The frightful sins of infanticide and abortion, the deplorable ignorance of the laws of health manifested in our dress, in over-work, over-study and infant mortality, and in the ventilation and overcrowding of our dwellings, the disposal of our sewage, the want of public baths, the neglect of vaccination, the adulteration and insufficient supply of food; these are some of the subjects which we have considered from time to time in our pages, and which, we need not here repeat, are of the highest importance, not only to the individual now, but to our national existence hereafter. The public press has always been so much absorbed in the discussion of the political and moral questions of the country that it has entirely forgotten how much these are influenced by the physical condition of the people, and our own profession, the natural guardian of such interests, has hitherto devoted its energies rather to remedy the evils of disease than to prevent them. It is, moreover, wanting in executive ability, and seldom urges to a practical test the measures of sanitary reform, of which it alone can comprehend the wisdom and necessity, or uses the proper means to enlighten the public concerning them. We do not sufficiently maintain our influence with the people by directly instructing them, as we ought, in the laws of health, but remain content with the communication of our knowledge to each other. Efforts have, it is true, been made to popularize such information in our country, and the lively interest felt by all the educated classes of society in the National Sanitary Association before the rebellion, showed how important they esteemed, and how willingly they would receive the public teachings of our profession. That society no longer has an active existence, and now that peace allows us once more to turn our whole thoughs to the amelioration of our race, we welcome any attempt to organize a similar association amongst us.

Such an undertaking, we are happy to inform our readers, is now under consideration by gentlemen of this city, and a circular has been issued to those interested in philanthropic measures by the Board of State Charities, asking their advice and coöperation. It is not intended, however, to limit its objects to so narrow a field as that of the Association above mentioned, but to make it, in fact, a State and national association for the promotion of all departments of social science and reform, like that of the same name in England; an organization which has been in active operation for nine years, which includes

among its officers and members the most eminent men of all the learned professions in that country, and the printed transactions of which contain the most valuable practical papers and discussions on subjects connected with national prosperity that have ever been published. Like this, it is proposed that the object of the association here shall be "the discussion of those questions relating to the sanitary condition of the people, the relief, employment and education of the poor, the prevention of crime, the amelioration of the criminal law, the discipline of prisons, the remedial treatment of the insane, and those numerous matters of statistical and philanthropic interest which are included under the general head of 'social science.'" It has been suggested "that a local society should be established in every State in which there shall be sufficient interest taken, and that these societies shall all be represented annually, in a National Convention of the League, the proceedings of which shall be published, along with such contributions from the local societies as may be selected." The preliminary meeting for organization will be held in this city on the first Wednesday of October, when the general objects contemplated in the plan will be publicly announced and papers on special subjects will be read.

How large is the field of opportunities awaiting the labors of such a body, and how much more may be accomplished in investigation and reform by the systematic efforts of its members, aided by the authority which must attach itself to such an association, than by individual workers in the same paths of philanthropy, will be comprehended at once. Our profession will recognize how deeply it is interested in its success, how important the part it will be called to play in its proposed labors, and the long-needed opportunity it affords of addressing the public on such essential points of hygiene as those above mentioned. We trust, therefore, that it will at the outset take that lead in the organization and direction of the association for which it is so peculiarly fitted.

Foreign Medical Intelligence.—Mr. Lawrence, so long Senior Surgeon of St. Bartholomew's Hospital, London, has resigned his position. The *Lancet* says he has tenaciously held his office in spite of all the warnings of age and the representations of his best friends, and wishes it could have recorded his retirement under circumstances which might have justified a warmer tribute to his unselfishness and sense of public duty. Mr. Wormald, President of the Royal College of Surgeons, succeeds him.

Prof. Malgaigne has been obliged by ill health to resign his surgical chair at the Faculty of Medicine of Paris.

Sir William Hooker, the eminent English botanist, is dead.

Prof. T. H. Huxley has been appointed Fullerian Professor of Physiology at the Royal Institution of Great Britain.

Dr. Julius Klob has received the appointment of Extraordinary (ausserordentlich) Professor of Pathological Anatomy at the University of Vienna.

Dr. Carl Pagenstecher, the well-known oculist, recently died at Elberfeld.

During the period 1835–63, according to M. Boudin, 2238 persons were struck by lightning in France. Twenty-five per cent. of these were killed under trees.

M. Edward Robin, in a communication to the Academie des Sciences, proposes to diminish the activity of respiration without diminishing the quantity of air entering the circulation, by the administration of large quantities of coffee, or anti-putrid substances, which by their combinations with proteic matters give rise to compounds which are not destructible by oxygen in the moist state. This method is to effect the following results:—1. To diminish the urgency of respiration so as to render anæsthesia less dangerous. 2. The production of artificial hybernation in mammalia. 3. The induction of fattening without the supply of fat or its materials. 4. The adjustment of alimentation in hot countries. 5. The diminution of the inconveniences of insufficient nutriment. 6. The diminution of the danger of surgical operations.

In addition to the new epizoötic disease, so fatal at the present time among the cattle in England, scarlatina is killing pigs very rapidly in Ireland. The eruption is so thick and highly colored that the sufferers are called "soldiers." Death comes on very quickly; the brain being found congested and all the vessels overcharged. The disease has long been known in France, and was very fatal in Ireland twenty-five years ago.

By order of the War Department, Dr. Abraham M. Wilder, Surgeon U. S. Volunteers, and Dr. B. B. Breed, of Lynn, have been promoted to the rank of Lieut.-Colonel by brevet, for meritorious and faithful services during the war.

American Pharmaceutical Association.—The thirteenth annual meeting of this Association will be held in this city on Tuesday, Sept. 5th, commencing at 3, P.M., at the rooms of the Massachusetts College of Pharmacy, Temple Place.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, August 19th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	51	51	102
Ave. mortality of corresponding weeks for ten years, 1853—1863,	54.8	49.3	104.1
Average corrected to increased population - - - - -	00	00	114.66
Death of persons above 90 - - - - - - - - -	0	0	

Died,—At Parsonfield, Me., Dr. Moses Sweat, in the 77th year of his age.

Deaths in Boston for the week ending Saturday noon, August 26th, 102. Males, 51—Females 51. Accident, 5—inflammation of the bowels, 2—disease of the brain, 1—inflammation of the brain, 1—bronchitis, 1—cholera infantum, 20—cholera morbus, 1—consumption, 18—croup, 1—cyanosis, 1—debility, 1—diabetes, 1—diarrhœa, 2—dropsy, 3—dropsy of the brain, 3—drowned, 1—dysentery, 11—typhoid fever, 4—typhus fever, 1—disease of the heart, 3—infantile disease, 1—insanity, 1—disease of the liver, 1—inflammation of the lungs, 2—marasmus, 2—old age, 2—paralysis, 2—puerperal disease, 1—purpura hæmorrhagica, 1—disease of the spine, 1—tumor, 1—unknown, 5—whooping cough, 1.

Under 5 years of age, 44—between 5 and 20 years, 9—between 20 and 40 years, 17—between 40 and 60 years, 15—above 60 years, 17. Born in the United States, 72—Ireland, 20—other places, 10.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. LXXIII. THURSDAY, SEPTEMBER 7, 1865. No. 6.

CASES OF CEREBRO-SPINAL MENINGITIS IN POST HOSPITAL, GALLOP'S ISLAND, BOSTON HARBOR, FROM SEPTEMBER, 1864, TO MAY, 1865.

[Reported to the Boston Society for Medical Improvement, June 12th, 1865, and communicated for the Boston Medical and Surgical Journal.]

BY CALVIN G. PAGE, M.D.

CASE I.—L. B. L., recruit, from Pittsfield, Mass., 18 years old, light complexion, blue eyes, and of bilious, sanguine temperament. Was admitted to hospital Sept. 14th, having been unwell for two days previous to reporting at sick call. When first seen, patient was complaining of severe headache, attended with extreme weakness; had been vomiting bilious matter, and had had several evacuations of thick mucus of the consistence of gruel; no pain in the bowels; tongue was badly coated and flabby; pulse at wrist barely perceptible; patient stupid, but not delirious. I ordered hot baths, during which purple spots of irregular shapes appeared on the abdomen, chest and thighs, increasing in size and color very rapidly; extremities cold and shrivelled. By hot applications externally, and stimulants internally, reaction commenced in three hours from the bath, and with it delirium, exhibiting itself by continued incoherent talking as long as the strength lasted, ending in a whisper at the last breath.

Sept. 15th.—Noticed rigidity of the muscles of the neck, with extreme tenderness of spine in lumbar region, and tendency to roll from one side to the other; very restless, constantly talking, and momentarily conscious when spoken to. I noticed this day an eruption about the mouth and nose of an erysipelatous nature, the purple spots rather tending to recede or dry, with a circumscribed base, as if about to slough, which did not occur, but they gradually disappeared by the fifth day from their appearance. There was no marked change in patient from this time to his death, which occurred on the 19th. Opisthotonos increased to the last, yielding to no treatment. Allowing the disease to have commenced on the 12th,

two days previous to his entry to the hospital, the length of the attack was seven days.

Case II.—E. D., recruit, from South Reading, Mass., 15 years old, dark complexion, slight in person, and not a healthy-looking boy. Patient was admitted January 29th, complaining of excessive pain in the head, of cold running down the back, and sickness at stomach, vomiting thick bilious matter. Cold applications were made to the head, and blisters to the neck and spine.

Jan. 30th.—Complains of pain "all over"; very sore to the touch, and no diminution of pain in head; is inclined to coma. Face to-day is flushed, and pulse 120, slightly tremulous. Blisters drew well; also had a free evacuation from the bowels, but without result. Symptoms rather tending to congestion, which proved to be the case on the following day, as patient died comatose, and with stertor in breathing towards the close. There was no decided opisthotonos in this case, nor petechiæ, but from the extreme sensitiveness of touch and extent of pain in the head, I could class it under no other head.

Case III.—B. F. W., recruit, from Boston, 15 years old, slight in person, and not of robust constitution. Was admitted to hospital Jan. 9th, 1865, complaining of sickness at stomach, severe pain in the head and aching in every joint. The whole surface had a peculiar mottled appearance, being much like a faint eruption of measles, the spots more generally diffused, however, than in rubeola; having measles in hospital at the time, I concluded to put him in the measles ward. Patient was delirious at times during the day, and very restless; pulse 130.

Jan. 10th.—Could perceive no eruption; pulse still 130, and irregular. Had him put in the main ward. No abatement of pain; still delirious and very restless.

11th.—Patient seems brighter, but no better; the pulse increasing and tremulous; face livid; head very hot, with decided symptoms of congestion; no opisthotonos; pupils dilated; breathing labored. Patient died in the early part of the afternoon. Like the preceding case, I could class it under no other head, although the symptoms were indistinct.

Case IV.—O. W., recruit, from near New Bedford, was 19 years old, a stout, robust, healthy person. The only defect found at time of examination was a dry, hard, callous-like ulcer on the bottom of the heel, which, from his own account, discharged occasionally a watery fluid, causing no pain, nor in any way interfering with his daily avocation as a teamster. January 28th, patient came to sick call, feeling slight headache and tired. I ordered cinchonated whiskey, and excused him from duty.

Jan. 29th.—Reported this morning as feeling much the same; had vomited during the night from overloading the stomach with sweetcake and pie. In the afternoon of the same day, the sergeant

came to the hospital, stating that the patient was much worse and was turning purple. I ordered him brought to the hospital immediately. On his arrival, I found the whole surface covered with petechiæ; patient insensible, and evidently too far gone to resuscitate. No morbid symptoms in this case until within thirty minutes of his death.

Case V.—L. C., old soldier, from Plymouth, Ct., 30 years old, was sent to this post for transportation, convalescent from some disease, I know not what. I was called to see patient in barracks, as having a fit. Found no paroxysm, but a constant tumbling from right to left side, he unable to speak and seemingly unconscious. I ordered him to hospital, and administered chloroform, with the usual effect while under its influence. Patient vomited bile, with no change of symptoms, and was so restless as to require strapping to the bed. Symptoms yielded slightly under large doses of opium, producing, however, no real relief. He died the day following, of congestion. No opisthotonos or petechiæ, but emprosthotonos, with decided cerebral trouble of some kind.

Case VI.—A. A. M., recruit, from Cambridgeport, Ms., 19 years old, stout and healthy, of sandy complexion, a teamster. Came to sick call, feeling unfit for duty, but not really sick. Gave no medicine. In the afternoon, came to hospital feeling sick at stomach, with slight drowsiness of head. Gave an emetic, which had seemingly a favorable effect. This was at 4, P.M. At 6 I examined patient and found him, to use his own words, feeling every way comfortable, but cold. I could discover no pulse at the wrist, and extremities were stone cold. I changed his bed to one beside the stove, to which he walked with perfect ease. Could discover no petechiæ, although the steward noticed them when he first came in. No opisthotonos, but decided symptoms of congestion. He died at 9 that evening, having the stertorous breathing similar to the preceding cases.

Case VII.—J. E. S., old soldier, from Concord, N. H., 22 years old, florid complexion, of nervous sanguineous temperament; subject to epilepsy. Patient was brought here from the boat, having been taken while *en route* for this post. Symptoms were, excessive pain in head and limbs, and prostration; no vomiting or petechiæ. I applied leeches to the temples, and gave oleum ricini, ℥ ss., ol. croton. tiglii, gtt. iij. This was February 15th. The day following, patient complained less of pain in head, but felt stiffness in cords of neck. Made use of stimulating liniment to neck, and gave pil. hydrarg., gr. vii., at bedtime.

17th.—Is feeling better, but very weak. Ordered stimulating diet, and continued the liniment. On the 20th, patient was able to sit up; still very weak.

21st.—Patient complained more of stiffness of neck and joints of lower extremities; is feverish and wandering, inclining to whistle rather than to talk. Could perceive no swelling of joints, and but

slight contraction of muscles; tongue coated and not easily managed. Patient remained much the same for some days. On the 26th, noticed a difficulty in swallowing and a hesitation in answering questions; head more inclined to left side, evincing great pain when moved; countenance troubled, and had a peculiar stare when spoken to; evacuations from bowels and bladder involuntary, although regular and natural. From this date patient gradually sank, with no change in character of disease, and died March 17th, 1865, four weeks and two days from first attack. Could discover no petechiæ in this case, but decided opisthotonos of the entire left side, with complete prostration, was present from Feb. 21st. Patient had gonorrhœa when admitted, which continued to time of his death; also slight swelling of testicle in the early part of the attack.

Case VIII.—O. B., old soldier, 20 years old, stout, and to all appearance healthy. Was admitted to hospital February 8th, 1865. Complained of excessive pain in head, neck and side, to which blisters were applied, and pil. hydrarg., gr. vii., was given at night.

9th.—Head and neck still very painful, patient shrinking from the slightest motion of either. Ordered liniment to neck; also, quinia, grs. v., Dover's powder, grs. vii., every four hours.

10th.—The same. Continued treatment. Tongue thickly coated, but moist.

11th.—Ordered pil. hydrarg., grs. vii., at night. Liniment. Patient complains less, but still shrinks from pain; is at times delirious. I used beef-tea and egg punch freely.

16th.—Patient allows himself to be moved, although very sore and weak. As in the last case, the head inclines to the left shoulder, and symptoms every way resemble that case. Patient is of much stronger constitution, and was free from disease of any kind. Patient was discharged from hospital March 2d, convalescent.

Case IX.—J. P., old soldier, from Providence, R. I., 17 years old, rather small and immature, but apparently healthy. Was admitted to hospital February 10th, 1865, at the time comparatively helpless, with involuntary discharges from bowels and vomiting of bilious matter. Petechiæ were seen on the abdomen, with muscular contractions from head to heels. Delirious most of the time. Blisters were applied to neck and spine, hot stones to feet, and quinia sulph., grs. vij., capsicum, grs. ij., whiskey, ʒ ij., every three hours during the day. Dover's powder, gr. vij., morph. sulph., gr. ¼, at bedtime.

11th.—Muscles of neck very tense, and head so drawn back as to obstruct the œsophagus. This continued for three days, during which time injections of beef-tea and wine, each one pint, were given every three hours, nights excepted. On the fifth day from the attack the muscles of the neck relaxed a trifle, and patient could with great effort swallow a little; in doing which, copious discharges of dark, tenacious mucus were produced. From this date patient continued to improve on stimulating diet alone.

March 1st.—Noticed swelling of parotid gland, attended with pain and loss of appetite, tongue coated, and feverish symptoms accompanying. I gave potass. chl. sol., freely painting the neck with tinct. iodine at night. A full month was embraced in subduing this attack, patient being able to walk by means of crutches.

May 1st.—Acute rheumatism set in, attended with swelling of joints and difficulty of breathing, probably the effects of sudden cold. No fever, no disturbance of bowels, no coating of the tongue, and yet patient could not be moved or touched without screaming. I gave sol. potass. iodidi during the day, and one fourth of a grain of morphia at bedtime. Generous diet. At present time patient is able to sit up and stand, but not to walk. His chances seem good for recovery. I should have stated that deafness attended the first attack.

Case X.—J. B. F., recruit, from Berkshire County, Mass., 18 years old, not a healthy person. Admitted February 18th, 1865, complaining of chills, weakness and slight headache. Gave oleum ricini, ʒ ss. Afternoon.—Still complains of feeling cold. Gave quinia, gr. vij., capsicum, gr. ij., whiskey, ʒ ij. and ordered a hot bath, which brought out spots on the face and body. Pulse barely perceptible; extremities very cold, and countenance anxious; mind perfectly clear. In all cases thus far the spots have been angular, of no particular shape, and generally from the size of a small bean to that of a chestnut. The prominent symptom in this case was the sensation of cold, as expressed by the patient's constantly stepping out of bed to go to the stove, which he did thirty minutes before he died, death taking place twelve hours from the attack. No opisthotonos, or pain, except in head, and no amount of heat made any impression upon the chilliness. The dilatation of the pupils was very great.

Case XI.—C. I., recruit, from New Ipswich, N. H., 18 years old, robust, healthy, and every way sound. Was admitted February 23d, complaining of headache and complete blindness. Tongue coated, and stinging pains in arms and legs. Gave oleum ricini, ʒ ss., ol. croton. tigiii, gtt. iij. Noticed spots on arms, legs and face; also noticed redness of the eyes. In one hour's time the spots, which were more circular than angular, increased from the size of beans to large patches, running together, especially on the forearms, growing very dark and sore to the touch. Pulse feeble; extremities cold, but patient expressed himself as feeling comfortable, if let alone.

24th.—Spots still very dark and swollen, showing a disposition to slough, having every appearance of sores from caustic potash.

25th.—Line of demarkation very distinct, especially on the arms and wrist. On the 26th, skin sloughed out, leaving the whole inner surface of forearm down to fascia raw and excessively painful, suppurating freely. Spots on legs formed thick crusts, discharging matter from the under surface continually. From the commence-

ment of the sloughing, patient improved slowly until near the first of April, when sore mouth and tongue set in, attended by profuse expectoration, similar to ptyalism. This subsided in a fortnight's time, and patient improved rapidly in every respect, excepting the eyesight, which only allowed him to discern objects independently of form.

May 11th.—Patient received his discharge from the U. S. service, which prevented any further observation of the case. There was no opisthotonos in this case, or cerebral disturbance. Secretions and evacuations every way natural and healthy.

Case XII.—A. S. P., recruit, from Gardiner, Me., 21 years old, very robust and healthy. Was brought to hospital early in the morning of March 20th, insensible, helpless and very restless; head inclined backwards, but muscles not rigid; tongue badly coated and brown; face very red, and pulse high.

22d.—Eruption about the face, more particularly the mouth and nose; could discover no spots, nor did the patient seem sensible to pain. Patient would pass his water involuntarily, and most of the time was delirious. Symptoms continued bad from the commencement to the time of his death, April 8th, 1865.

Case XIII.—Dr. G. A. P., recruit, from Jaffrey, N. H., 40 years old, a practising physician, came to this post from Concord, N. H., having attended a case of spotted fever previous to coming here. Excessive pain in the head and limbs; prostration; purple spots on the abdomen, making their appearance on the third day from the first sensation of illness. Patient was admitted to hospital April 11th. Neck stiff, very sore to the touch and inclined to left side. No change in symptoms until April 13th, when the face, directly in front of right ear, commenced to swell, and by night had increased up and down, from the temple to the clavicle, embracing the parotid gland, very hard and extensive, and not seemingly painful.

15th.—Pus commenced discharging from the ear, very freely. No fluctuation in the tumor.

17th.—An incision was made at the base of the tumor, also another on the day following, followed by free discharge. During the first two weeks patient seemed perfectly indifferent, would answer indirectly, with momentary consciousness. Patient continued to improve from the commencement of the discharge from the abscess. Most of the time had no control of rectum or bladder.

May 7th.—Was conveyed home, convalescent.

Case XIV.—J. R., recruit, from Boston, Mass., 38 years old, of delicate constitution, sailmaker by trade. Was admitted March 22d, with pains in whole body; felt so sore as not to bear his weight; cramped all over; inclined to be stupid. No spots perceptible, nor were there any other prominent symptoms. His breathing was stertorous previous to his death, which occurred March 30th, eight days from attack.

Case XV.—A. W. F., recruit, from Bangor, Me., musician, 19 years old, stout and healthy. Symptoms as in previous cases. Was admitted April 3d. Pulse very high; neck stiff, and although sensible, could not speak; countenance troubled, and patient very restless. Sodæ bisulph. was given freely, and continued, with no perceptible effect.

4th.—Pulse 100; face flushed, and paralysis of left side.

5th.—Stertorous breathing, with livid countenance. Patient died in the afternoon. No spots or opisthotonos.

Case XVI.—W. L., recruit, from Hopkinton, Mass., farmer, 19 years old, was at the time of attack in hospital for measles. Admitted March 6th.

10th, 4, P. M.—Spots came out all over the body; no headache; mind clear. In two hours the whole surface was nearly black, in which state patient died, complaining only of difficulty in breathing. Patient occupied the bed previously used by Case VIII. Whether the disease had any other than a peculiar turn and terminus of measles I cannot say; it certainly differed from anything I ever witnessed. The spots were isolated, and wholly independent of the rubeola.

Case XVII.—W. M., recruit, from Roxbury, Mass., 19 years old, healthy. Was admitted March 7th. Died March 10th, having symptoms like the previous cases. Petechiæ on abdomen. No opisthotonos.

Other cases of a mild character have occurred, but hardly deserving mention. I would remark that in all cases, mild or exaggerated, erysipelatous eruptions have occurred on the third or fourth day from attack; and in all cases where the patient was conscious, soreness of the limbs and feet has prevailed, and in most cases involuntary discharges from the rectum and bladder. In but two instances could anything like contagion be traced.

ANALYSIS OF CASES.

	Admitted.	*Died.*	
1. L. B. L.	Sept. 14th, 1864.	Sept. 19th.	
2. C. B.	Jan. 25th, 1865.	Jan. 27th.	
3. E. D.	" 29th, "	" 31st.	
4. O. W.	" " "	" 29th.	
5. L. C.	Feb. 6th "	Feb. 7th.	
6. O. B.	" 8th "		Recovered.
7. B. F. W.	" 9th "	" 11th.	
8. J. P.	" 10th "		Recovered.
9. A. A. M.	" " "	" 10th.	
10. E. F.	" 14th "	" 15th.	
11. J. E. S.	" 15th "	March 17th.	
12. J. B. F.	" 18th "	Feb. 18th.	
13. W. L.	March 6th "	March 10th.	
14. W. M.	" 7th "	" "	
15. A. S. P.	" 20th "	April 8th.	
16. J. R.	" 22d "	March 30th.	
17. J. F. P.	" 29th "	April 16th.	
18. A. W. F.	April 3d "	" 5th.	
19. G. A. P.	" 11th "		Recovered.

NITROUS OXIDE—IS IT SAFE FOR INHALING?

[Communicated for the Boston Medical and Surgical Journal.]

This is a question often asked by the patient about to inhale it for anæsthetic or sanitary purposes.

To this query all varieties of answers are returned by all grades of intelligence. One "professor," who claims a wide scope in the field of industrial chemistry, basing his opinions on the rude experiments of Davy and the older chemists, pronounces it a dangerous inhalant, of which the public should beware. Another "professor," equally assumptive, clamors for its indiscriminate use in hygiene and anæsthesia; and so opinions differ. The question is one we care not to discuss, farther than may be done in the simple statement of some of the experiments made by ourselves and one or two friends during the past year.

Every agent employed in medicine has its right and its wrong uses; and no drug wrongly prepared or ignorantly administered should be made responsible for its failure to do that claimed for it by the profession.

Few agents employed in surgery and hygiene are more widely known and less understood than nitrous oxide. The fact that it has been taken possession of to a great extent by charlatans in science, has caused the more intelligent to neglect the study of its nature and adaptation to the relief of pain and disease.

When properly prepared and properly administered, we cannot but regard it among the safest of inhalants. That prepared by ourselves we have inhaled to entire anæsthesia *one hundred and ten* times during the past ten months, with a very perceptible improvement in our general health, while we have given this gas to others, for sanitary and anæsthetic objects, some three hundred times in the same period; and in no single instance do we remember meeting with the least unfavorable result. In certain dental establishments in this city it is almost, if not entirely, used for anæsthesia. The proprietor of one of these recently stated to us that it had been employed by him for anæsthesia in nearly eight thousand cases, with not a serious result.

But by some it is urged that while perhaps safe for brief anæsthesia, this cannot be predicated of the gas in protracted operations. In at least three instances, we have known entire anæsthesia maintained during surgical operations lasting from four to seven minutes, with the most happy effects on awakening. Others assure us of success with this in cases of anæsthesia much more protracted. From what we have heard and witnessed ourselves, we have reason to believe that entire insensibility to pain may be safely maintained for a longer period than with ether or chloroform. This may be inferred from the vitalizing character of nitrous oxide, which maintains the temperature and pulse by oxidizing the blood, while it is well known

that the effects of ether, or more particularly chloroform, are the reverse of this.

In the preparation of nitrous oxide and its indiscriminate use by ignorant and unskilled practitioners, is it any cause for wonder that cases of injury should be occasionally reported? Considering its extensive use, is it not rather a wonder that so few such should occur?

Until within a short period, insensibility was produced, in most of the dentists' offices where the gas was used, by inhaling this from small rubber bags and allowing the breath to return and be re-inhaled—the quantity of the nitrous oxide being in many cases wholly insufficient to counteract the poisonous carbonic acid from the lungs. Thus insensibility was produced by the aid of asphyxia—the lips of the patient often assuming a purple hue, while the head seemed distended and filled with fearful sounds, followed by severe headache upon the patient's returning to consciousness. Such a barbarous application of this agent has only served to excite ridicule from certain caustic pens, and prejudice the community against the gas rather than against such a disgusting application. Indeed, even professors in some of our colleges and compilers of our text books on chemistry have done not a little to mislead in this matter. In four school chemistries now before us, this gas is represented as being prepared by washing in a single bottle holding less than one quart of water, and in two of these books the inhalation is directed to be made from a *bladder of about the capacity of the patient's head!* With such guides no wonder that itinerant professors have such success, and that in some cases dentists find it "injurious" to their patients.

To be safe, nitrous oxide, like chloroform, should be properly made and administered. In making this gas, we employ an automatic regulator of the heat, confining the nitrate of ammonia in the flask to a temperature scarcely above 400°. The results of decomposition at this point are quite different from those where the heat of the salt is fluctuating, rising at times to 500°, and even to 600°, as is common by the ordinary process of heating. Thus prepared, the gas in its passage to the gas-holder is forced through five one-and-a-half-gallon glass washers, filled with an alkaline solution and pure water; each washer being provided with perforated glass tubes for finely dividing and washing the gas. Thus five distinct plunges are made through as many feet of water, when the gas is passed into a zinc receiver, where it is confined over water. This whole process is simple, safe and economical.

For inhaling we employ an improved valved apparatus, drawing the gas directly from the zinc holder and exhaling into the open air. With this arrangement perfect anæsthesia in its most agreeable form may be produced, while even the most sensitive lungs suffer not the least inconvenience.

The efficiency of nitrous oxide depends on the degree of its absorption by the blood which meets it in the lungs; and this of course on the amount inhaled and the time it is retained in these. We have seen anæsthesia caused by only three deep and slow inhalations of capacious lungs; while in the case of surface breathing from compressed or diseased lungs, the process is often prolonged to twenty or more inhalations. And in this connection we may say that in several instances we have found the capacity of the lungs increase with each trial of the gas, with a corresponding shortening of the period preceding anæsthesia.

As a sanitary agent in pulmonary consumption and certain acute diseases, we feel confident that nitrous oxide in its purity has its merits, sufficient at least to claim the investigation of professional skill. May it not have at least a trial by such, and a fair and scientific verdict be rendered? Its extensive use in hygiene and surgery demands this, rather than that it be left in unskilled hands, a butt for professional lampoons.

Boston, August 17th, 1865.

ON THE ANTAGONISM OF ATROPIA AND MORPHIA, FOUNDED UPON OBSERVATIONS AND EXPERIMENTS MADE AT THE U. S. A. HOSPITAL FOR INJURIES AND DISEASES OF THE NERVOUS SYSTEM.

By S. Weir Mitchell, M.D., Wm. W. Keen, M.D., and Geo. R. Morehouse, M.D.

During our connection with the U. S. A. Hospital for Injuries and Diseases of the Nervous System, we have been obliged to resort to every possible expedient for soothing the pain of those terrible cases of neuralgia, which in some shape are apt to follow as a consequence of neural injuries. Among these means incessant use has been made of hypodermic injections, which alone in many instances seemed able to overcome the anguish of certain forms of neuralgic distress. To what extent we have employed this mode of relief may be gathered from the fact that, at certain periods of our service, the resident surgeons made every day from twenty to thirty subcutaneous injections. In one case half a grain to a grain of morphia was injected thrice a day, and the man finally recovered after having used nearly four hundred injections.

We were naturally led to examine with care into the pretensions of the several agents which have credit for their power to lessen or destroy the sense of pain. The results of this inquiry were of the more value, because they were confined to the use of these agents by injections only, and because they were studied by more than a single observer. Our investigation brought us finally to consider the therapeutic relations of atropia and morphia, to which subject the greater bulk of this paper will be devoted.

The information which our note-books give in regard to the comparative value of remedies used to allay pain, is the result of an almost unexampled experience, and we shall not hesitate briefly to relate it before passing on to our main topic.

After repeated trials of conia, atropia and daturia, with the intention of relieving pain by their subdermal use, we ceased to resort to them. On the other hand, the employment of morphia, or of some preparation of opium for subcutaneous use, became a part of the every-day routine of practice.

Like others, we have met with certain inconveniences attendant upon this mode of employing morphia. In rare cases it always caused distressing sick stomach, but as the pain for which we used it was oftentimes agonizing, the patient usually preferred to endure the sick stomach rather than fail of the delightful relief he obtained from the injection. In these instances it was commonly observed that the morphia ceased after a time to produce either nausea or emesis.

The local annoyances resulting from injections so long continued and so numerous, were sometimes very embarrassing, for though in some men they could be used in the same limb week after week, in others the numerous punctures produced a very unpleasant increase of sensitiveness in the part. Such an instance may be found on page 151, Case 31, of our treatise on wounds and other injuries of nerves. In other persons the injections gave rise to occasional abscesses, and in a soldier who was at one and the same time the subject of a very painful wound of the arm, and of a cold abscess on the back, every injection gave rise to a large indolent abscess. One instance of erysipelas following the use of an injection was seen by us. (*Op. cit.*, p. 150.)

As the opinion of many good observers is quite decided as to the fact that the injection gives the same relief, whether made near to or remote from the seat of pain, we may with reason be asked, why we used so many injections in the same limb or neighborhood. The answer lies in the fact that our patients very early, and we ourselves later and more reluctantly, reached the conclusion that the point at which the injection was to be employed was not a matter of indifference. In the milder instances of neuralgia a subdermal injection of morphia used anywhere in the body did give relief, but in cases of "burning neuralgia," such as we have described in our book on nerve wounds, p. 100, *et seq.*, the nearer we could bring the agent to the place where the pain was felt, the greater was the ease obtained. We are the more anxious to insist upon this matter, because we neglected to make the same comment when detailing our mode of treating these lesions in the volume above mentioned. The belief thus reached is certainly not altogether unphysiological, as we very well know that morphia is capable of causing a local paralysis of sensory nerves, with which it may come in contact. * * * *

If we be correct in the views expressed in the foregoing pages, certain practical lessons of some value may be learned from them.

If atropia lessens or destroys the unpleasant influence of morphia on the cerebrum, but does not alter its power to allay pain, there seems no reason why we should not use them together so as to obtain all that is best from the morphia with the least amount of after discomfort.

We have certainly had good results from such a use of both drugs, in the form of suppositories, in cases of disease of the bladder or generative organs.

Again, it is sometimes desirable to use either drug in very full doses. This we may do quite fearlessly when assured of our ability to restrain its action by a full exhibition of its opponent.

The foregoing experiments and observations authorize us, we think, to draw the following conclusions as to the use of hypodermic injections, and as to the antagonism of atropia and morphia:—

1. Conia, atropia and daturia have no power to lessen pain when used subdermally.

2. Morphia thus used is of the utmost value to relieve pain, and is most potent, in certain forms of neuralgia, the nearer it is applied to the seat of the suffering.

3. Morphia lowers the pulse slightly or not at all; atropia usually lowers the pulse a few beats within ten minutes, and then raises it twenty or fifty beats within an hour. The pulse finally falls about the tenth hour below the normal number, and regains its healthy rate within twenty-four hours.

4. Morphia has no power to prevent atropia from thus influencing the pulse, so that, as regards the circulation, they do not counteract one another.

5. During the change of the pulse under atropia, the number of respirations is hardly altered at all.

6. As regards the eye, the two agents in question are mutually antagonistic, but atropia continues to act for a much longer time than morphia.

7. The cerebral symptoms caused by either drug are, to a great extent, capable of being overcome by the other, but owing to the different rates at which they move to affect the system, it is not easy to obtain a perfect balance of effects, and this is made the more difficult from the fact already mentioned, that atropia has the greater duration of toxic activity.

8. The dry mouth of atropia is not made less by the coincident or precedent use of morphia. Atropia does not constipate, and may even relax the bowels; morphia has a reverse tendency.

9. The nausea of morphia is not antagonized or prevented by atropia.

10. Both agents cause dysuria in certain cases, nor is the dysuria occasioned by the one agent relieved by the other.

11. Atropia has no ability to alter or lessen the energy with which morphia acts to diminish sensibility or relieve the pain of neuralgic disease.

12. As regards toxic effects upon the cerebral organs, the two agents are mutually antidotal, but this antagonism does not prevail throughout the whole range of their influence, so that, in some respects, they do not counteract one another, while as concerns one organ, the bladder, both seem to affect it in a similar way.—*American Journal of the Medical Sciences.*

ON THE DYSMENORRHŒA, METRORRHAGIA, OVARITIS, AND STERILITY ASSOCIATED WITH A PECULIAR FORM OF THE CERVIX UTERI, AND THE TREATMENT BY DIVISION.

By Robert Barnes, M.D.

The author described and figured the form of cervix uteri which projected into the vagina as a conical body, the vagina appearing to be reflected off at a point nearer the os internum than normal. The os externum was usually minute, scarcely admitting the uterine sound. This (the os externum) was the real seat of constriction. The os internum normally was a narrow opening; and in these cases of dysmenorrhœa and sterility it was commonly found to be of normal calibre. It was, therefore, unnecessary to divide it. It was, moreover, dangerous to divide it, on account of the close proximity of the large vessels and plexuses running into the uterus on a level with it. The author maintained that this form of cervix was a cause also of retro- and peri-uterine hæmatocele, and of peritonitis. All these consequences might arise in single women. In the married state the evils enumerated were aggravated, and new ones arose. Women with this peculiarity were generally sterile; and if they became pregnant it was early in life, before the further consequences were developed. These were flexions, deviations, inflammation of the cervix and body, hypertrophy. Discussing the question of treatment, the author showed that dilatation was unsatisfactory; that incision of the os internum, as practised by Dr. Simpson's single bistourie caché, and by Dr. Greenhalgh's double bistourie caché, was unsafe and superfluous. He objected to the latter instrument, especially, that it must cut as it was set—that it was too much of an automatic machine, not leaving scope for the judgment of the operator. His (Dr. Barnes's) own instrument, constructed like a pair of scissors, acted on the same principle as Dr. Sims's; it divided only the os externum, so as to open the cavity of the cervix; the part to be cut being first seized between the two blades, the operation was perfectly free from risk; the hæmorrhage was usually slight, and a good os was made. He had performed the operation

many times, both in hospital and private practice, and was well satisfied with the results. One advantage of incision over dilatation was, that it relieved the engorgement and inflammation.

In illustration of the behavior of the conical cervix uteri under labor, two cases were narrated. In one, the cervix and os uteri had returned to their original state, although a fœtus of four-and-a-half or five months' development had been expelled through them. In the other case it was necessary to open the cervix artificially by means of the author's cervical dilator and incisions in order to deliver a full-grown child. In both cases pelvic cellulitis followed labor.

Mr. Baker Brown thanked Dr. Barnes for having brought the subject forward. He agreed with most of what had been stated in the paper; was opposed to dilatation as being inefficient and temporary. He described his mode of operating, which was to place the patient in the lithotomy position, and having introduced a bent speculum, he seized the os with a pair of forceps, and divided it with Simpson's hysterotome. He never divided the internal os; always used a plug of oiled lint to prevent hæmorrhage. He regretted that the operation had lately been condemned by a high authority, but believed it was the only efficient and permanent remedy for these painful affections.

Dr. Greenhalgh was surprised to hear the President's opinion that the seat of stricture in these cases was mostly at the external os. He (Dr. Greenhalgh), on the contrary, expressed his conviction that in the great majority of cases the stricture is situate at the internal os, and consequently he recommended division of the internal as well as the external os. After division he usually introduced one of his bilateral expanding stems, which keeps up steady dilatation and prevents contraction. As regarded hæmorrhage, which some appeared so to dread, he had never but once met with it, though he had operated in nearly one hundred cases. He always used his own bilateral instrument, which cuts both sides at once. The advantages of his plan of operating were, he believed, extreme exactitude, facility, painlessness, and the avoidance of any personal exposure. He expressed his surprise at the remark of Mr. Brown that he never divided the internal os, when he (Dr. Greenhalgh) had seen him on several occasions freely incise the internal os in the cases under consideration.

Mr. Baker Brown, in answer to Dr. Greenhalgh, said that that gentleman must be mistaken in what he had seen at the London Surgical Home. He repeated that he never in cases of dysmenorrhœa cut through the internal os. Dr. Greenhalgh was evidently confounding this operation with that for fibrous tumor, retroversion, retroflexion, &c., of the uterus, in which he (Mr. Brown) incised freely, and generally through the internal os.

Dr. Routh fully confirmed Dr. Greenhalgh's view. For his own part he believed in by far the majority of cases the obstruction was

at the *inner* and not the *outer* os; although he did not deny that in some cases of conoid cervix it was present at the external os. He agreed with Dr. Gream in believing that Dr. Sims's plan of operation would occasionally leave a deformed cervix for life; and he did not think it was necessary to cut through the entire cervix. The instrument Dr. Greenhalgh had invented obviated all danger from hæmorrhage. The same was true of his (Dr. Routh's) instrument, which he, however, preferred, because on the bend, and therefore more easy of application in *flexion* cases. A little bleeding was salutary. In most of these cases there was a complication of congestion, which the very incision, by the subsequent hæmorrhage, relieved. But there was no doubt that such incisions, however freely made, had a tendency to contract again. Hence it was necessary to keep the cut made patent by some internal uterine pessary, and for some time, it might be for months, so as to allow it to become properly lined with mucous membrane and incontractible. He knew several persons now walking about London with these. In other cases their removal had been followed by conjugal relations and pregnancy, though previously sterile for years. Of the use of spongetents and other modes of artificial dilatation, in these cases, he spoke disparagingly. He had seen cellular abscess and death follow their use. They should be used with the greatest caution. He also believed cases of dysmenorrhœa were more common than was generally supposed. Not only was the seat of obstruction more frequently at the *internal* os than the *external*, but, indeed, in many cases, the external os was patent and abnormally so, as shown by Dr. Henry Bennet. And there were many, and by far more numerous, cases of dysmenorrhœa which were in no way due to stricture at either os. As these cases were not, however, referred to by Dr. Barnes, he did not allude to them further. * * * *

Dr. Graily Hewitt thought that the two questions of the treatment of dysmenorrhœa and of sterility by means of incisions of the cervix uteri had been too much mixed up together. He would say a few words first respecting dysmenorrhœa. He believed that in bad cases of dysmenorrhœa the condition present was frequently retention of the fluid in the uterus, and that this retention caused the pain; and he had been at some trouble to prove this. But, on the other hand, he also thought that the condition was capable of being relieved, in most cases, without resort to mechanical treatment of the cervix uteri. The great thing was to diminish the flow of blood, and this could be regulated by general measures; but that there were a few cases in which such general measures were useless he admitted. He differed from the President in reference to the most common seat of the constriction; for although there were cases in which the os uteri was congenitally extremely small and narrow, yet in the larger number of cases of dysmenorrhœa the impediment was situated at the junction of the cervix with the body of the uterus. With

regard to the best method of applying mechanical relief when such was required, he thought that cases must be treated on their own merits. Where the cervix was hard and dense, the cutting operation was most indicated, the difficulty being here the greatest; but under other circumstances he preferred the use of tents as dilators. The sea-tangle tent was, he considered, a perfectly safe means of dilating the cervix uteri; but, he would repeat, the cases were few requiring this treatment. As to the mode of incising the cervix or os uteri, here again the operation must be selected according to the case: no one operation would be suited to all circumstances. He would next say a few words on the subject of sterility. It was undoubted that in certain cases the cure of sterility could be effected by dilating the cervix uteri, and much had been said as to the superiority of one mode of dilatation over another. The fact was, that so long as the canal of the cervix was a little enlarged, whether by incision or by dilatation, the necessary end would be served. The great object was to secure a tolerable patency of the canal at about the menstrual period, when conception was most likely to occur. Supposing the sterility to be cured, the dysmenorrhœa which might be associated with it would be also, in all probability, permanently relieved.

Dr. Marion Sims was surprised at the great difference of opinion expressed by previous speakers as to the seat of the obstruction, but he agreed with those who thought it was at the lower orifice. He then went into some statistical details of his own practice, and laid great stress upon the frequency of curvature of the cervix as a cause of obstruction at the internal os. Though it might, he thought, lead to an actual narrowing of the canal, yet he believed this was an extremely rare occurrence. But in cases of induration and conbidity the os tincæ was abnormally contracted in every case he had seen. Indeed, a conical indurated cervix was incompatible with a normal os tincæ, the existence of the one almost necessarily implying that of the other. With regard to cases referred to by Dr. Gream and Mr. S. Wells, in which the tissue of the cervix had been too largely incised, so that the lips of the os were everted and rolled backwards, he had never seen any such result after his method of operating, but had witnessed it after the metrotome caché; and he attributed it to this—because it cut deeper into the sides of the supra-vaginal portion of the cervix, and so divided the circular muscular fibres, which are naturally antagonistic to the longitudinal fibres. By his (Dr. Sims's) plan of operating, the incisions upward were more superficial, though the opening of the os was about the same in both methods.

The President, in closing the discussion, said that he only directed attention to one class of cases of dysmenorrhœa—that, namely, associated with the peculiar projecting form of cervix uteri, and usually attended by sterility. This was the form that required treatment by incision. The obstruction that required division was the

os externum or vaginal portion. The os internum normally was a narrow canal. Dr. Greenhalgh passed his instrument through it as preliminary to his operation. If it admitted this instrument, the os was of full normal size, and could not require cutting. His (the President's) instrument and operation were perfectly safe and efficient. He thought, after hearing Dr. Sims's remarks, that he had underrated the importance and frequency of flexion at the neck as a cause of obstruction.—*Proceedings of the Obstetrical Society of London*, in *London Lancet.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, SEPTEMBER 7, 1865.

MEDICAL COMMUNICATIONS OF CONNECTICUT STATE MEDICAL SOCIETY FOR 1865.—We always read the annual publications of our various State medical societies with interest, and are glad to note from year to year the higher attainment in medical science which they usually indicate. Doubtless there is much room for progress and improvement still; but it is sufficiently obvious that the annual meetings of these associations are becoming more and more what they should be, annual landmarks of the progress which medical science has made within their geographical limits.

The opening address in the pamphlet before us, by the President, Dr. Ebenezer K. Hunt, of Hartford, is mainly devoted to a history of the agency of the Society in originating and carrying out to successful fulfilment numerous projects for the physical welfare of the citizens, which have been of great practical importance. It thus appears that to the active benevolence of this Society the State of Connecticut owes the existence of the State Hospital at New Haven, and the State Lunatic Asylum. These projects originated with the State Medical Society, and were pushed through to successful completion, not only by the persistent labors of its Fellows, but by a liberal expenditure of money on their part—a test of the benevolent spirit which actuated them hardly to have been expected of a profession generally gifted so much more with good will to their fellowmen than the pecuniary means of manifesting it. It is no fault of the Society that other benevolent designs of equal public importance have not as yet been fully realized. Such is the proposal for an asylum for the reformation of inebriates, which was agitated so long ago as 1829, and strongly advocated by some of the leading members of the Society, under its sanction and authority. At the present day no one can doubt the wisdom of such an enterprise, and the successful working of institutions for the same end in other States must before long bring public opinion in Connecticut up to the point so long since reached by the medical profession there. The Society has also made most earnest efforts, as yet unsuccessful, to induce the legislature to make express provision for insane convicts, who are always to be found in considerable numbers in the State penitentiaries. The details of the

action of the Society at various times with reference to these benevolent projects, make up a large part of the President's address ; and it certainly is a most honorable record, showing that the medical profession in our sister State has taken the lead there in the principal moral and philanthropic movements for the benefit of the whole community.

As might be expected, the Society has been active in advancing the cause of medical education within its sphere of action, and has an intimate connection with the Medical Institution of Yale College, one half of the board of examiners for medical degrees in that institution being members of the Society, appointed by the Medical Convention. So that the picture which the President draws in his concluding paragraphs of "the appropriate work of each and every member of the Society" may be said to be a fair representation of their action in times past.

"The founding of hospitals and providing them with all the means and appliances required for their satisfactory operation, and taking the entire professional charge of them—superintending our schools for the acquisition of professional knowledge, and pressing forward as fast as circumstances admit, the requisitions for practice, or looking after these receptacles of human woe, as well as of human depravity, to be found in our alms-houses, jails, and penitentiaries ; to improve, so far it may properly be done, their methods of management, and to be at all times prepared to offer for their adoption the best results of hygiene ; and, finally, to improve our every opportunity for personal and associate advancement in our chosen calling, by means of which we can best fulfil our great mission to man ; these constitute, in general, and at all times, the appropriate work of each and every member of this Society."

The second article in the Transactions before us is the annual dissertation, read before the Convention May 25th, of the current year, by Dr. John E. Blake, of Middletown, on the "Mothers of New England." It is an earnest, forcible appeal to his hearers to use their influence to check, as far as possible, the ruinous tendency of modern systems of education, errors of diet and social luxury, and especially of the criminal practice of what he calls semi-legalized infanticide, which are rapidly breaking down the standard of female health amongst us, entirely unfitting large numbers of women for the important functions and duties of maternity. These topics are not unfamiliar to the readers of this JOURNAL, and we are glad to find they are so justly appreciated by our professional brethren in Connecticut. We hope they may be stimulated by Dr. Blake's dissertation to new efforts to do something to stay this wide-sweeping flood of ruin, so appalling in its prospect to every well-wisher of his country.

The next article is a sensible essay on the Prevention of Phthisis, by Dr. George W. Burke, of Middletown. It does not present much novelty of theory or practice, but is wise, judicious and practical. The author has a higher opinion of the curative efficacy of the hypophosphites, we think, than most physicians who have employed them in this disease.

Other papers of interest treat of Specifics, Strangulated Hernia, the Wet Sheet Pack in Scarlatina, and Diphtheria as it prevailed in Madi-

son, Ct., in 1864, but we are compelled to pass them by with this cursory notice. The usual biographical notices and the records of business of the Society, &c., conclude the volume of Transactions. As a whole, it shows a creditable state of activity in the Connecticut Medical Society, which we hope will lead to still greater results.

Aneurism of the Sciatic Artery treated by Injections of Perchlorure de Fer.—M. Nélaton treated some time since an aneurism of the terminal portion of the sciatic artery, projecting from the buttock, by injections of the *perchlorure de fer*. The case was the more interesting as the patient had formerly had an aneurism in the same region, for which the artery had been tied above the tumor. After a single injection the pulsation had entirely disappeared, the tumor gradually diminished, no inflammation followed, and at the end of a month the patient was perfectly well.—*Gazette Médicale*, Montreal, from *Gaz. des Hopitaux*.

Transactions of the American Medical Association.—The following volumes are for sale, and can be had either of the Treasurer Dr. Caspar Wister, No. 1303 Arch St., Philadelphia, or Dr. William B. Atkinson, Permanent Secretary, No. 215 Spruce St. It is thought that many members of the Association will be disposed to purchase these volumes on learning the terms on which they can be procured. Proceedings of the Meeting of Organization, 50 cents. (Vols. I., II., III., IV. and VI. are out of print.) Vols. V., VII., VIII. and IX., *if taken collectively*, $5 for the set. If singly, $2 apiece. Vols. X., XI., XII., XIII. and XIV., at $2 apiece. Vol. XV., at $3. Vol. XVI. in press. If the volumes are transmitted by mail, thirty-two cents in postage stamps should be forwarded to Treasurer or Secretary.

M. Nelaton's fee from the Czarewitch.—It is known that M. Nélaton received 400,000 francs for his professional visit to the late Czarewitch. It is not so well known, we believe, that this fee was asked, not, as has been stated, because the famous surgeon was too rich and too old to make the journey, and that he therefore set a prohibitory tariff, but because M. Nélaton avoids all utterly hopeless cases, as this was known to be, and thus does not endanger his just reputation for saving his patients, where there is a gleam of hope. The fee demanded by the French Surgeon whom Queen Amalie recommended to King Leopold, without successful result, amounted, it is said, to 150,000 francs. The English surgeon who operated successfully on the royal patient (Mr. Henry Thompson) left the honorarium to his Majesty's good will and pleasure, and received £4,000 and an order of Belgian chivalry.—*London Athenæum*.

An Army Medical Board will meet in New York city on the 20th inst., for the examination of candidates for admission into the Medical Staff of the United States Army, and of assistant surgeons for promotion. Applicants must be between 21 and 36 years of age, and physically sound. Applications must be addressed to the Surgeon-General of the Army, stating the residence of the applicant, and the date and place of his birth; this must be accompanied by respectable

testimonials of moral character. If the applicant has been in the service, he will send the testimonial of the chief medical officer under whom he has served, and if in service at the present time, the application must be sent through the Medical Director of the respective Department. No allowance is made for the expenses of persons undergoing the examination, as it is an indispensable pre-requisite to appointment. There are now twelve vacancies in the Medical Staff.—*Medical and Surgical Reporter.*

PRODUCTION OF PETROLEUM IN THE UNITED STATES IN THE YEAR 1864.

	Gallons.
Exported	33,467,424
Refined in Pennsylvania for domestic consumption	13,349,974
Refined in other States for domestic consumption	8,665,215
Total	55,482,613

To arrive, however, at a correct conclusion respecting the production of petroleum, we should remember that of the above amount probably 46,000,000 gallons was refined oil, and would equal, therefore, 60,000,000 of crude oil. Besides this, there is always great loss by evaporation, flood, fire, and many other causes. The destruction of 10,000 barrels in the beginning of March, 1864, in one lot, is known. Then, again, there is a very considerable quantity used for lubricating purposes. Hence it is evident that the actual production of petroleum during 1864 must have largely exceeded the total given above.—*Hunt's Merchants' Magazine.*

DR. J. THEODORE HEARD, Surgeon U. S. V., of this city, has been promoted to the rank of Lt.-Colonel by brevet for meritorious services. Dr. Heard was one of the first of our young surgeons to offer his services to the country at the beginning of the war.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, SEPTEMBER 2D, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	51	44	95
Ave. mortality of corresponding weeks for ten years, 1853—1863,	52.0	51.0	103.0
Average corrected to increased population - - - - -	00	00	112.48
Death of persons above 90 - - - - - - - - -	0	0	

COMMUNICATIONS RECEIVED.—Laughing Gas and the Extirpation of a Cancer.—Singular case of Monstrosity.

DIED,—At New Castle, Del., on the 12th ult., James Couper, M.D.

DEATHS IN BOSTON for the week ending Saturday noon, September 2d, 95. Males, 51—Females 44. Abscess, 1—accident, 1—anæmia, 1—congestion of the brain, 2—disease of the brain, 4—bronchitis, 1—cholera infantum, 22—consumption, 13—croup, 1—debility, 1—diarrhœa, 8—dysentery, 5—erysipelas, 1—scarlet fever, 1—typhoid fever, 1—disease of the heart, 1—infantile disease, 2—intemperance, 1—disease of the kidneys, 1—congestion of the lungs, 1—inflammation of the lungs, 1—marasmus, 8—measles, 1—peritonitis, 2—premature birth, 3—disease of the spine, 1—syphilis, 1—teething, 1—unknown, 3—whooping cough, 5.

Under 5 years of age, 61—between 5 and 20 years, 8—between 20 and 40 years, 12—between 40 and 60 years, 5—above 60 years, 9. Born in the United States, 77—Ireland, 14—other places, 4.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. LXXIII. THURSDAY, SEPTEMBER 14, 1865. No. 7.

REPORT UPON THE EPIDEMIC OCCURRING AT "MAPLEWOOD YOUNG LADIES' INSTITUTE," PITTSFIELD, MASS., IN JULY AND AUGUST, 1864.

BY DRS. A. B. PALMER, C. L. FORD AND PLINY EARLE.

[Communicated for the Boston Medical and Surgical Journal.]

MAPLEWOOD Young Ladies' Institute, a well-established and popular boarding school, at Pittsfield, Mass., has lately been visited by a violent outbreak of sickness, bringing prominently before the medical profession and the public various questions connected with its sanitary condition.

During the latter part of July, 1864—from about the 23d to the 29th—five persons were attacked with a severe form of disease; and during that period, and up to the 10th of August, when a regular term ended and the school was closed, some thirty others were sufficiently indisposed to require the advice of a physician. There were, at the time, 77 young ladies, from many of the Eastern, Middle, and Western States, who were boarding, lodging and receiving instruction in the institution. Besides the Principal and his immediate family, seven or eight teachers resided in the establishment. The whole family, including servants, consisted of about 112 persons. There were, in addition, quite a number of young ladies and misses, residents of the town, who attended the exercises of the school as day pupils, lodging and boarding at their homes.

Of the five persons taken seriously ill, as before mentioned, one was a teacher, who recovered after a long and severe sickness; but the other four, three of them pupils and the other a servant girl, died. The first death was of the servant girl, and occurred on the 2d of August. The three pupils died, respectively, on the 3d, 7th and 10th of that month.

At the close of the term, on the 10th, the pupils hastily dispersed—a few leaving before that time; but many were so seriously indisposed at the time of leaving that they performed their journeys home under the influence of quinine and alcoholic stimulants; while one, too ill to leave, remained sick for some time in the Institute, and two others proceeded no farther than to a private house in the

immediate neighborhood, where they each suffered from a severe and protracted illness, but ultimately recovered. A week or two after the close of the term, two young ladies, day scholars residing in the village, were attacked in a manner similar to the others. Two or three servants connected with the Institute family were also attacked, and one of them died. Numerous reports of sickness and death among those who had left were shortly afterwards received; articles on the subject were published in several newspapers, and the public were profoundly agitated with sympathy, curiosity, anxiety and alarm.

The large proportion of the pupils reported to have been attacked, and the unusual severity and fatality of the cases, pointed to some local cause at the Institute. The time for the opening of the next term approached. No one conversant with the facts could think of sending a daughter to a place so apparently infected, until the subject had been investigated. Under these circumstances, the trustees of the school assembled on the 16th of September, and recommended that the Principal should "consult the best medical authority within his reach, and immediately take the most efficient means to remove not only any local cause which may be shown to have been developed by the remarkable heat and drought of the last summer, but also any cause which may be suspected by said authority to have had any influence in occasioning said disease." On the following day two of the undersigned were requested, in a note from the Principal, to act in accordance with the advice of the trustees, as a committee of investigation and direction; and at their request the third was added to their number.

On the 20th of September the committee commenced their investigation, and, accompanied by two physicians of Pittsfield, visited the premises; and on this and repeated subsequent occasions examined every part without the buildings and within, observing all conditions as they then were, and, with much pains and labor, taking testimony from a large number of persons as to all conditions, previously existing, which were deemed capable of affecting the health of persons brought within their influence. These conditions will be hereafter detailed. A few days afterwards, having been furnished by one of the teachers of the school with the names of the ninety-two pupils who had been in attendance during the summer term, they addressed the following circular either to the pupils themselves or to their parents or guardians.

"PITTSFIELD, MASS., Sept. 19th, 1864.

"The undersigned have been appointed a committee to investigate the causes which may have produced the recent sickness among the inmates of Maplewood Young Ladies' Institute, and wish to learn, definitely, the amount and character of that sickness. They therefore respectfully solicit full, explicit and immediate answers to the following questions:—

"How long did Miss —— reside at Maplewood, and what was the date of her leaving?

"Was she ill during her residence there, or has she been ill since she left?

"If ill, when did the sickness commence?

"What was the character and duration of such illness?

"What was the result of the sickness?

"To what causes, here or elsewhere, do you attribute such sickness?

"At the time of her illness was a similar disease prevailing in her neighborhood?

"Please address, without delay, Dr. A. B. Palmer, Pittsfield, Mass.

"A. B. Palmer,
"C. L. Ford,
"Pliny Earle,
} *Professors in Berkshire Medical College.*"

They also addressed the following circular to each of the physicians of Pittsfield:—

"Dear Sir,—The undersigned, a committee to inquire into and ascertain, if possible, what causes may have contributed to the serious illness which has prevailed among the pupils of Maplewood Young Ladies' Institute, would respectfully request such information as you may be able to impart concerning the diseases which have prevailed, and your views as to the probable causes of such disease. Both humanity and science seem to demand a careful inquiry into the causes of such a calamity.

"Very respectfully, A. B. Palmer,
C. L. Ford,
Pliny Earle."

For the purpose of presenting some facts in the order in which they occurred, and because subsequent events seem to make this statement necessary, we would here say, though somewhat out of logical order, that during the time which had elapsed between the closing of the term, on the 10th of August, and our visit of inspection on the 20th of September, great changes, in accordance, it is alleged, with previous plans, had been effected at Maplewood. The old corridors, to which we shall hereafter refer, had been replaced by entirely new ones, lighted, elevated and much improved in construction. The privies or vaults, hereafter to be described, had been completely removed, even to their foundation stones, together with the earth which was around them, and their places obliterated by freshly-drawn earth, while others of proper construction had been substituted. Some new drains had been dug, and a large and deep cesspool, at a considerable distance from the buildings, was being constructed to receive the slops of the kitchen, the chambers and the laundry.

The ground near the buildings from which a barn had been re-

moved during the warm season, had been for the most part deeply covered with fresh clean earth. An offensive pool in the barn-yard had been filled up. The whole premises had been thoroughly cleansed, lime had been freely scattered about, the buildings within had been well washed, ventilated and disinfected by lime, and the furniture freely exposed to air and light.

After being satisfied that these improvements would be persisted in, and besides, that in accordance with their suggestion, the foliage in some places should be removed for a free admission of light and air; that the laundry drain should open into a capacious cess-pool, instead of having any portion of its contents flowing upon or near the surface; that the chamber slops should be conveyed to the distant large covered cess-pool, instead of being thrown, as before, into the vaults; that the hot-air furnaces, some of them supplied from the cellars with air to be heated and sent into the rooms, should be provided with cold-air flues duly opening externally; that the cellars where vegetables were kept should be plastered overhead, and ventilated by flues running into chimneys, the following paper was given to the Principal by the committee:—

"PITTSFIELD, MASS., Sept. 22, 1864.

"Having, at the request of the Principal of Maplewood Institute, thoroughly inspected the buildings and premises of that institution with reference to its sanitary condition, we are prepared to express our unanimous opinion that with the improvements already completed and in progress and soon to be completed, the school may be opened at its usual period in October, with every prospect of the salubrity of former years."

Signed by the committee.

From a circular recently issued, the committee are gratified to learn that no case of sickness has since occurred in the Institute.

The committee have deemed this narration of their proceedings important to be taken in connection with the more material statements which are to follow, giving, as it will, a proper view of their course and the care with which they proceeded in a matter involving so many and such important interests.

Of the ninety-two pupils to whom the first circulars were sent, it was subsequently ascertained that fifteen had not been in attendance during the last four weeks of the term, most of them having left on account of ill health—several having had measles at the school.

Our special inquiries, therefore, embraced seventy-seven pupils—the entire number who boarded and roomed in the seminary buildings during the last month of the term. Replies to the circular were received from seventy-four pupils, or their friends; and from these replies it appears that fifty-one have had typhoid fever, including those cases of pupils residing in the house, already referred to. The disease has been pronounced "typhoid fever," with singular uniformity, from sources widely remote, in the many distant homes to

which the pupils repaired. Three or four were reported of a mild form, such as would be called, by some authors, "abortive typhus"; but a very large proportion of the cases are represented as severe in form, and continuing for several weeks. Of the twenty-three not reported as having had typhoid fever, nine or ten had, in a milder form, premonitory symptoms, which speedily yielded to treatment; one had dysentery; one reported "slow fever"; one, "anæmia"; two, "unwell," nature of case not stated; and eight reported themselves as "well" in the Institute, and for a short time afterwards. Of the 51 cases of typhoid fever among the pupils, 13 terminated fatally, or about 25·5 per cent. The remainder have more or less perfectly recovered.

The very large proportion of so great a number of persons being ill and having typhoid fever within so short a period, points unequivocally to something peculiar in their condition; to their exposure to noxious influences of some kind, either in their locality, their diet, or their habits. This will be more strikingly seen when the sanitary condition of these persons is compared with that of the community at large by which they were surrounded. Of the 74 resident pupils heard from, 66 are reported as having had illness of some kind, at the close of the school or soon after. This is a proportion of $\frac{33}{37}$, or nearly 90 per cent. Of these same 74, 51 had typhoid fever, or a proportion of nearly 69 per cent. If all the people in the town, say 8000, had been affected in an equal proportion, more than 7000 would have been ill during these few weeks, and about 5500 of them would have had typhoid fever; and of these, over 1375 would have died. If it would be a more just comparison to take the whole family at Maplewood into the account, estimating the number at 112, 56 had typhoid fever, or 50 per cent.; and of these 56, 16 died, or over 28·5 per cent. These proportions applied to the whole population of 8000, would give 4000 of typhoid fever in the same time; and of these, 1140 would have died. According to the testimony of the practising physicians of Pittsfield, the number of cases of real typhoid fever, during this period, aside from those affected by the influences at Maplewood, was small, some physicians not having had any, others having had two or three.

From a perfectly reliable medical gentleman of the town, the committee have received the following statement:—"I have seen all the regular physicians, and requested them to give me the exact number of typhoid-fever patients they treated about the time of the Maplewood sickness—that is, during the month of August. Dr. R. says he had two; Dr. S., three; Dr. A., in full practice, says, 'outside of Maplewood, not one.' Dr. C., aside from pupils and servants of the Institute, one; Dr. B., besides two young ladies who were day scholars at the Institute, two." These, it will be seen, make in all but eight cases; and so far as the committee are informed or believe, none of them terminated fatally. The town records

show that at other portions of the season—or at least between July 1st and December 1st—five or six deaths were reported from typhoid fever, about the same number as the year previous; but all of the cases occurring during the month of August, when the Maplewood sickness prevailed, seemed to result favorably.

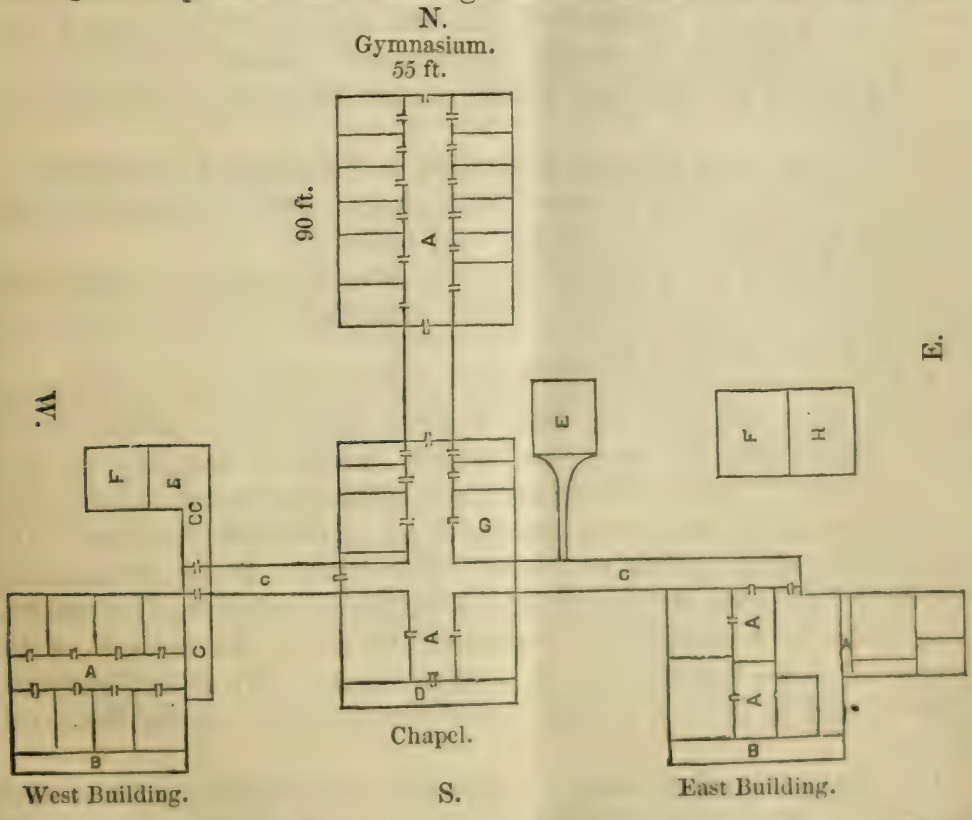
This comparison is sufficient to dispose of the question as to some peculiar and special cause or causes having operated upon these persons, and must go far towards riveting the conviction, in all unprejudiced and properly informed minds, that these causes were local. It is proper to state that the committee have not doubted this since the first day of these formal investigations; but still they have endeavored, and they think successfully, to pursue these investigations with all the care and impartiality that they would have exercised had this fundamental point been with them still an open and doubtful question. The great questions still remaining, to which science and humanity both demand an answer, are, 1st, what is the cause or what are the causes of this extraordinary and really appalling sickness? and, 2dly, by what means, under similar circumstances, could such a calamity be prevented? In view of the numerous and most respectable parties, the patrons of this popular institution, scattered over a large portion of our country, who have a special interest and right in this matter, and who request to know; and particularly in view of the vast interests of science and humanity, all personal and private considerations sink into utter insignificance, and the exact and entire truth, so far as it is possible to ascertain it, must be fully and plainly told. All the light which it is possible to obtain should be thrown upon the most important questions above stated.

In making inquiry into the causes of this disease, the topography of Maplewood, the character and position of the buildings, and all their surroundings, require attention.

The town of Pittsfield, Berkshire Co., in which the Institute is situated, is one of the most elevated, and has been regarded as one of the most healthy places in Western Massachusetts. It is in a broad valley, several miles in each of its diameters, but not of much depth, and where but a moderate portion of the soil is at all alluvial. The soil is generally gravelly and porous, the rocks granitic and calcareous, the surface finely undulating, traversed by running streams which propel the machinery of numerous manufacturing establishments, and swell occasionally into abruptly marginal lakes. Within this valley, on the northwest side of the village, and from half a mile to a mile beyond Maplewood, the principal mill-stream runs for some distance a little more sluggishly in its course, and its margin consists of a level meadow of considerable extent, partaking somewhat of the character of a marsh. It has not, however, hitherto been generally regarded as a source of malarial disease; and people living more immediately upon its margin have not been observed to be

more sickly than those in the town. The village is supplied with water, reputed to be of very pure quality, from the distant hills on the southeast side. It is brought through an aqueduct, and has generally given satisfaction to the inhabitants. The village, containing about 5000 inhabitants, is not compact, excepting the business buildings in its centre. Most of the dwellings are isolated, and surrounded by ample grounds. It should be mentioned, however, that in many parts there is a superabundance of shade trees, and that there is no system of pavements, or of sewerage, or underground drainage. Still, as is very justly observed in the catalogue of Maplewood, "For salubrity of climate, beauty of scenery and environments, of hill and valley, Pittsfield can hardly be surpassed. The long ranges of the Hoosic and Taconic Mountains on the east, south and west, with Saddle Mountain on the north, enclose a valley of great fertility, appropriately denominated and well known as the 'garden of the Bay State.' In the centre of this valley, on a gentle elevation overlooking the town, towards the south, and the country far and wide, stand the buildings of the Institute, presenting, especially from the lofty observatory attached to the gymnasium, a commanding and inspiring prospect."

A ground plan of the buildings of the institute is here annexed.



A, Halls. B, Piazzas. C, Corridors. CC, Ladies' Corridors. D, Portico. E, Commodes. F, Sheds. G, Cabinet. H, Cottage.

In the central building, consisting of two stories and a cellar, the first floor is occupied for recitation rooms, cabinet, &c., and the se-

cond as a chapel and general study room. The cellar contains furnaces, coal, vegetables, &c. On either side of the chapel is a building consisting of three stories over a cellar. That upon the east is called the "east building"; the other, the "west building." To the east building is attached a wing of two stories, with a basement. The basement of this wing, together with a part of the cellar or basement of the main building, is occupied as a kitchen and storerooms; the other part as a cellar proper, containing coal and accommodating furnaces for heating the parts above. The first floor of this building, above ground, is occupied for parlors, library, dining room, and the apartments for the family of the Principal. The two stories above are used as dormitories for the pupils—a lady teacher occupying one room on each floor. A hall passes through the centre of each of these stories, from east to west. The rooms of the pupils are upon sides of the halls, opening into them and receiving their heat from them in cold weather. The basement of the west building is occupied as a laundry; and the other three stories, as dormitories, arranged as in the two upper stories of the east building, and as shown in the diagram.

The gymnasium is situated in the rear of the chapel, and consists of two stories and a cellar, or basement. The first floor has rooms chiefly for practice in music; while the second, a large and high room, 55 by 90 feet, is used as a gymnasium proper. The basement is a depository for fuel, and contains the furnaces for heating the building.

The privies were situated as marked in the diagram (commodes)—one near the northeast corner of the chapel, and the other not far from the northeast corner of the west building.

The buildings were all connected by covered passage-ways or corridors, and these covered ways were extended to the privies, as is also shown in the diagram.

A few rods east of the northeast corner of the east building was situated, until removed in July, a barn which had been there for many years, and the barnyard, which extended towards the east building, was in part lower than the surrounding ground, containing water in which swine were reported to have wallowed, and which frequently emitted offensive odors. The kitchen drain opened some 80 or 90 feet from the corner of the building, and though an attempt was made by a temporary expedient to cover the course of the stream of slops flowing from the large kitchen, it was but partially effected, and in the hot weather unpleasant odors issued from this source.

The drain from the laundry under the west building opened upon the surface of the ground fifty-six paces southwest from the southwest corner of the building, and thirty feet from the sidewalk of the public street; and the water from it, after being detained and partially absorbed, as alleged by the Principal, in a large covered cess-

pool, issued at the point before mentioned, sometimes at least in a condition to annoy those who passed in its vicinity. The committee observed a small cess-pool near this point, but it appeared not to have been recently used as a receptacle at the time of their investigation.

The vaults of the old privies, which had both been removed when the committee made their inspection, were represented to them as having been shallow, and filled nearly to the surface of the ground with semifluid materials, as they were the receptacles of the slops from the chambers.

One of them was once cleaned out at night in the course of the hot season of last summer.

For a knowledge of the condition of these vaults, of the openings of the kitchen and laundry drains, of the cellars, and of the cleanliness of the whole premises, the committee are entirely dependent upon the testimony of others, as so radical a change had been made when the investigation commenced; and they hold themselves responsible only for a fair statement of the general current and weight of that testimony.

Although there is not perfect accordance among those who have voluntarily made statements, or have been interrogated, yet there is quite as much unanimity as is usually found where numbers of honest and impartial persons bear witness to the same series of like complicated facts. Hence the committee have no doubt of the general truth, most positively alleged by many, that the vaults, as well as the openings of both drains, emitted, during the hot and dry weather, decidedly and sometimes exceedingly offensive odors. Great annoyance was often felt, as stated by a teacher, at the indelicacy of these odors, and not unfrequently windows were obliged to be closed, particularly at night, to prevent the influx of the outer air, as the confined atmosphere within the rooms was less offensive than the air from without. The testimony as to the necessity of closing windows against offensive odors, comes to us from sources hundreds of miles apart, in letters, in oral statements from living witnesses, and, as reported by their friends, from the lips of those who will speak no more.

This was stated not of one room only, but of several, and of rooms in both buildings; and not alone of the windows of the dormitories, and in the night, but of some of the recitation rooms, and in the day time.

As the condition of the privies is a point so exceedingly important in the case, the inquiries of the committee in respect to that condition have been extended and minute; and, to show that the testimony at least justifies the preceding statements, a few quotations from the letters of pupils and others who had been at Maplewood, and wrote from the evidence of their senses, are added. These letters are in answer to definite interrogations on the subject. The embar-

rassment which the committee, and especially the only accessible witnesses, have felt in pursuing this matter, will readily be appreciated, and the necessity of making special inquiries will be understood. One of the pupils, in her communication, says:—

"Since you request it, I *will* be perfectly frank and plain, feeling assured that you can understand and appreciate the unpleasantness of discussing such a matter in so free a manner; but I, with you, think the cause demands it, and am willing to sacrifice my own feelings, to almost any extent, for the purpose of throwing a little light on so dark a question."

She continues:—"There certainly was an unpleasant smell about the west building. We did have reason to complain of our rooms being very offensive at times. Indeed, the air was often so foul that we found it necessary to close both doors and windows, and this during the warmest of the weather, too. Perhaps you are not aware that there are no vaults proper* connected with the west building. If you could see the internal arrangements of this department, your only wonder would be how it happened that we did not all die of some pestilential disease. The smell that used to come up from that place, those hot July evenings, was enough to breed a fever in one night. All the slops, &c., from the rooms were deposited in these places. This I know to be a fact, for I have seen it done. These places were seldom if ever cleaned, and what their condition must have been you can imagine, I'm sure. Now, do you wonder what the stench meant, where it came from, or what caused it?"

The following is from one who roomed in the east building:—

"You ask if my room was rendered unpleasant by any peculiar odors. I have repeatedly been obliged to close my window on account of unpleasant odors, not only in the day time but particularly at night. I have risen, after retiring, to close it—the odor being almost suffocating. It seemed to proceed from the vaults and an old barn near my window, which had just been removed, leaving the cellar exposed."

The next is an extract from a letter received from the mother of one of the pupils who died at Maplewood:—

"I cannot convey to you a correct idea of the state of the air in the hall of the west building, unless I state the fact that I asked my daughter, the morning after my arrival, if there was not a water-closet on that floor. She replied, 'No—the smell you notice comes from the privies.'"

The following is an extract from a letter from the father of a teacher who died a few days after reaching home:—

"Her mother informs me that she complained of the privy as being very offensive, and that they cleaned it out in one of the warmest

* This is understood to mean that the excavations were so shallow that they could not properly be called vaults, and, as elsewhere expressed, were so filled as not to give the appearance of vaults.

nights, and the odor was perfectly dreadful, and that she believed it had something to do with the sickness. This was said on the evening of her arrival home."

In order to give a fair and impartial hearing of the whole case, it is proper here to state that in a communication from the Principal, received after the foregoing statements were submitted to his inspection, he furnishes the testimony of three witnesses, all of which is inserted.

The first is one of his lady teachers, whom he quotes as saying:—"I was never inconvenienced by offensive odors, and do not remember to have heard complaints from those occupying rooms in the same building with myself (the east building) implying a necessity for closing doors and windows. If any such case existed, it was not known to me."

The next is one of the physicians who visited patients in the institution, and who is quoted as saying:—"I never perceived the effluvia from either vaults or drains in the rooms of the pupils, only in the corridors and main hall of the chapel. I have never perceived the odors from the outlets of the drains, either in North or First street."

The third witness is another medical attendant, and who is reported as stating:—"In all my many visits to Maplewood during the past summer, I did not at any time, so far as I recollect, discover any odor from the vaults or drains of the institution in the dormitories of the pupils, nor did I ever discover any such odors in North or First Street. All the odor I discovered was in passing through the corridors when the doors leading to the privies were left ajar. Furthermore, I never heard from any one any intimation that such odors had been noticed, or were noticeable, until the panic occurred as the result of the cases of sickness last summer." The Principal adds that other similar (negative) testimony could be adduced.

In justice to those who have given more *positive* testimony, and for the purpose of obtaining correct notions of the facts, it should be observed that the language of the first witness quoted is very guarded, and, undoubtedly, like the evidence of all the rest, was entirely conscientiously given. She was not "inconvenienced by offensive odors." She does not say they were not perceived. She does not remember to have heard complaints from those in the "same building" "implying a necessity for closing doors and windows."

We know that individuals differ much in the acuteness of the sense of smell; and it does not appear how acute this sense was in these particular witnesses; neither does it appear how far pupils were encouraged in complaining to their teachers, or how far their modesty and delicacy would allow them to complain to others, especially to gentlemen, of offensive odors of this kind.

Whatever may have been the condition of this sense in the medical gentlemen as the result of their professional training and their

experience in sick rooms, they both testify that odors were discovered in the corridors, and one remembers to have observed them in the chapel hall; and those corridors in which all admit the existence of bad odors, led to the halls and dormitories of the pupils; and the tendency of such air to ascend and permeate the entire building need not be stated. Not without interest in connection with this subject is the ascertained fact concerning the occupants of the southeast corner room in each story of the west building, the rooms most directly connected with such sources of contamination. The lower room was occupied by three, all of whom were dangerously sick and one died. The two who occupied the corresponding room of the second story had a severe and protracted fever; while the teacher and her sister who occupied the room in the third story directly over these, both died.

For whatever reasons these pupils refrained from complaining to teachers and others of these odors, they did complain to the committee, as their numerous communications show; and not, it may be suggested, as the result of panic (for many of them wrote weeks and even months after the events so unparalleled in the history of local epidemics, and so calculated to produce excitement, had occurred), but from an unpleasant knowledge of the facts, and from a sense of duty to the cause of humanity, truth and science.

It is not impossible, indeed it may be regarded as probable, that in some instances statements were strongly made (the strongest are not in the report), and it seems quite likely to the committee that with some the exceptional cases of very bad smells dwelt most vividly in the memory, and found expression in language not altogether free from the coloring of emotion; but, after making all proper deductions, there must have been an amount of perceptible offensiveness, often quite uncomfortable and annoying to the inmates. A conviction of the extensive prevalence of such odors (at some times, to be sure, much more than others) cannot be avoided.

[To be continued.]

Treatment of Chronic Diarrhœa.—In the Buffalo General Hospital, where sick and wounded soldiers have of late been received, Dr. J. R. Lothrop reports, during the year ending July 1, 1865, 126 cases of chronic diarrhœa. Of these, 108 recovered, and were discharged well; 16 were much relieved, and only 2 ended in death. The treatment adopted in these cases, says Dr. L., in the *Buffalo Med. and Surg. Journal*, was more largely dietetic and hygienic than medicinal. The astringent preparations of iron were more employed than any other medicines, and particularly the muriated tincture of iron. Continued for a long time, more benefit was perceptible from it than from any other medicine.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, SEPTEMBER 14, 1865.

MEETING OF THE AMERICAN PHARMACEUTICAL ASSOCIATION.—Pharmacy, so long known by the modest title of handmaiden of medicine, may well claim for itself in these days the rank of an independent art. From the mere mechanical slave of the pestle and rude compounder of simples, she has become mistress over the subtlest laws of chemistry, and has built up a science which we may be proud to recognize as a sister to our own. Our every-day use of the elegant and powerful means she furnishes for the relief of human suffering makes us, perhaps, unmindful of those who are working in a less ostentatious way in the same field with ourselves, but a closer bond of fraternity should be cultivated between our mutually dependent and kindred professions. Upon the skill and honesty of the pharmaceutist and apothecary we must wholly rely for the selection and preparation of those agents upon which our success in practice so materially depends, for rarely, to our shame be it said, is a physician to be found who possesses even an elementary knowledge of their art. To the labors of the scientific men who are engaged in its practice we are indebted for the simplest and best pharmacopœia in the world, nor does any country exhibit greater ingenuity or elegance in the products of its laboratories.

This progress in the art of pharmacy is in great measure owing to the influence of the American Pharmaceutical Association within the last few years. Controlled by the most eminent men, its efforts have been constantly directed to elevate the scientific character of the profession it represents, and its success is as much a cause for congratulation to us as to them. The thirteenth annual meeting of the Association was held in this city during the past week, and was well attended by delegates from nearly all the large cities in the country. For the following abstract of its proceedings we are indebted to the report of the *Boston Daily Advertiser*.

FIRST DAY.

After the appointment of a committee to nominate a list of officers for the ensuing year, the President, W. J. M. Gordon, of Cincinnati, proceeded to read his annual address. It was a document short and to the point, and was received with favor by the gentlemen present. The President congratulated the members of the Association on the auspicious circumstances under which they gathered, and expressed thanks at the closing of the rebellion and the restoration of peace. He said, in alluding to the Southern members who have not maintained their connection with the Association, that the doors were open for their return, and that the moral effect of such a union would be felt favorably over the whole country. The financial condition of the Association was very satisfactory; it is free from debt, and its treasury contains $350. As large a sum as $3458 is due from delinquents, chiefly arrears of four years. The President suggested that prompt action should be taken towards the collection of these arrears. The

President expressed it as his opinion that spirits for chemical and pharmaceutical uses should be exempt from taxation, and further thought that if this subject was brought properly before the committee of the next session of Congress, the relief desired could be obtained. There are obvious reasons why medicines should be produced as cheaply as possible—the large consumption of them by those illy able to bear the expense, who, at this time, are unable to labor and are dependent upon it for their support; while cheapness of the means of producing will offer less temptation to deception, and insure them of better quality. The internal revenue law, in the construction placed upon it for licenses and manufacturers' tax, is another heavy burden, said the speaker, to the pharmaceutist, and efforts should be made to remedy the evil. In conclusion, the President said that it was with extreme gratitude that he was able to say that, after passing through a period of more than four years of bloody war, and the withdrawal of so many from scientific pursuits, the Association presents so prosperous a condition, and expressed no doubt that it would, from this time forward, continue to go on in unexampled success and usefulness.

At the conclusion of the address there was some discussion on a proposed amendment to the constitution to the effect that there be a permanent secretary for the Association, with a salary. The amendment was finally adopted.

Invitations were received from the Superintendent of the Massachusetts General Hospital to visit that institution, and also from Prof. Gray, of Harvard College, to visit the Botanical Gardens.

Second Day.

FORENOON SESSION.

Mr. Stearns, chairman of the committee on nominations, presented the report of that committee, as follows:—

For *President*, Henry W. Lincoln, of Boston; *First Vice President*, George C. Close, of Brooklyn; *Second Vice President*, S. W. Sackrider, of Cleveland; *Third Vice President*, C. A. Heinitsh, of Lancaster, Pa.; *Treasurer*, Charles A. Tufts, of Dover, N. H.; *Recording Secretary*. J. M. Maisch, of Philadelphia; *Corresponding Secretary*, P. W. Bedford, of New York; *Executive Committee*, T. S. Wiegand of Philadelphia, John Butterworth of Boston, F. W. Lemewald of St. Louis, and T. H. Barr of Terre Haute; *on Progress of Pharmacy*, Euro Sander of St. Louis, G. H. C. Markoe of Boston, Theodore Kalb of St. Louis, Ferris Bringhurch of Wilmington; *on Drug Market*, S. M. Colcord of Boston, J. J. Thompson of Baltimore, William A. Brewer of New York, Ezekiel Sargent of Chicago, and W. J. M. Gordon of Cincinnati; *on Scientific Queries*, William Procter, jr., of Philadelphia, E. S. Wayne of Cincinnati, Edward Parrish of Philadelphia, and B. H. Stable of Alexandria, Va.; *Business Committee*, Dr. E. R. Squibb of New York, F. Stearns of Detroit, and J. F. Moore of Baltimore.

The list as reported by the committee was unanimously adopted and the officers elected. Prof. Crocker and Mr. Stearns were appointed a committee to conduct the newly elected President to the chair. Mr. Lincoln, on taking the chair, was received with applause. On assuming the duties of the office, he expressed his thanks for the

honor which the Association had conferred upon him, and welcomed them to Boston, hoping that their stay here would be profitable and pleasant to each and every one of them.

On motion of Dr. Squibb, the thanks of the Association were tendered to the retiring President, W. J. M. Gordon, Esq. On motion of the same gentleman, the thanks of the Association were tendered to the retiring officers generally.

The report of the Committee on the Progress of Pharmacy was next submitted through the chairman, Prof. J. F. Moore, of Baltimore. The report was referred back to the committee for completion, after being partially read.

The report of the Corresponding Secretary, next submitted, contained information in regard to the condition of the Pharmaceutical Associations in Massachusetts, New York, Philadelphia, Maryland, Cincinnati, Chicago and St. Louis. With the exception of those in Cincinnati and Chicago, their condition was represented by the report as being highly prosperous. A letter was read, in connection with the report, from an English association, enclosing resolutions of respect and good will. The report as read was accepted and referred to the executive committee for publication.

Prof. Maisch stated that he had received a communication from the librarian of the Royal Academy of Sciences at Munich, acknowledging the receipt of the proceedings of this Association, and requesting an entire set of its proceedings, and promising a set of theirs in return. Prof. Maisch stated that he had also received the proceedings of the Royal Academy of Berlin. On motion of Prof. Maisch, the Secretary was instructed to forward copies of the Association's proceedings to the above-mentioned Academies, and the Mercantile and Astor Libraries of New York.

The report of the Committee on the Drug Market, next in order, was called for. After some discussion, on motion of Dr. Squibb, the present committee on this subject was excused from reporting at this session.

Prof. William Procter, of Philadelphia, chairman of the Committee on Scientific Queries, submitted the report of that Committee, which was quite elaborate, and contained about thirty-three important queries. The report was accepted and appropriately referred. The reading of it closed the regular annual reports.

The next business in order was the consideration of the scientific queries offered by the committee at the last meeting. They were read by Dr. Squibb.

Query No. One.—The seeds of Cimicifuga racemosa are numerous and easily obtainable. What are their characteristic properties and chemical constituents?

The answering of this query was accepted by E. C. Jones, of Philadelphia. His paper was not ready.

Queries Two, Three and Four were passed over.

Query No. Five.—Could the poppy be profitably cultivated in any part of the United States, for the production of opium and poppy-seed oil?

Accepted by Edwin R. Smith, of Monmouth, Ill. A letter was read from this gentleman, which stated that sickness prevented the preparation of the report, but expressed an opinion that southern latitudes

would be required. Dr. Squibb, in this connection, displayed a specimen of opium manufactured in 1864 by a Virginia planter. It was also stated that it had been made in considerable quantities for the rebel hospital department. Dr. Henchman reported that he had seen opium made in New Hampshire in 1812 sold for ten or twelve dollars a pound. The subject was referred to Prof. Graham, of Pennsylvania, for report at the next annual meeting.

The answer to Query No. Six, accepted by H. N. Rittenhouse, of Philadelphia, was continued to the next year.

Queries Nos. Seven, Eight, Nine, Ten, Eleven and Twelve were passed over, as the answers were not presented.

Query Thirteen.—In what preparation may glycerine be used to prevent the deposition of apotheme? What is the minimum quantity that will answer the purpose, and will such preparation bear dilution?

Accepted by A. B. Taylor, of Philadelphia. This gentleman submitted a concise, interesting paper, which was accepted and referred to the executive committee for publication. The paper gave the opinion that the only preparations in which glycerine could be used for the purpose specified are fluid extracts, decoctions, infusions and tinctures, and accordingly experiments were instituted, with specimens of each of these classes.

Query Fourteen.—How far is glycerine capable of substituting alcohol in extracting drugs for pharmaceutical preparations? Would such substitution be economical?

Accepted by W. J. M. Gordon, of Cincinnati. The paper was short, and at its conclusion stated that glycerine could be used in the production of many medicinal extracts with much better result and greater economy than alcohol or sugar.

Query Fifteen was continued to G. F. H. Markoe, of Boston. Queries Sixteen and Seventeen were passed over. Query Eighteen was continued to J. J. Scattergood, of Philadelphia. Query Nineteen was passed over.

Query Twenty.—Will the L. styraciflua yield a product identical, or nearly so, with commercial storax if it is treated in the same manner?

Prof. William Procter, of Philadelphia, read an elaborate essay in answer to this query. Detailed accounts of experiments were given developing interesting results. The tree which is commonly known as the "sweet gum" of the South, produces a gum having a resinous, fragrant odor. Its identity with the storax was not established, but the Professor stated that he thought a further course of investigation might develop more interesting results.

Query Twenty-one was continued.

Query No. Twenty-two.—What are the best vessels in which to dispense ointments and cerates, combining fitness with elegance and accuracy; and what is the best plan for keeping this class of preparations in the dispensing shop, so as to retard their tendency to oxidation?

A paper written by William L. Thompson, of Baltimore, in answer to this query, was read by Prof. Moore. The opinion was expressed that glass vessels were the best for this purpose, although wood was excellent. In answer to the second part of the query, it was suggested that whenever the least tendency to oxidation manifests itself, the jar should be thoroughly cleansed by a peculiar preparation. The

position selected for the jars in the shop should be one in which the extremes of ordinary temperature is avoided.

Query No. Four was taken up, as Mr. Markoe had his answer prepared. The query reads:—

Which process for camphor-water is to be preferred, that of the United States Pharmacopœia or of the British Pharmacopœia?

Mr. Markoe, by figures and experiments, showed that the camphor-water of the United States Pharmacopœia contained four times the strength of that of the British.

Query Twenty-third was passed over, and the gentleman who had accepted the answering of this query was relieved from so doing.

At this point Mr. Parrish exhibited an improved filter, and interesting experiments were made with it, after which, at 2 o'clock, the convention adjourned to afternoon.

AFTERNOON SESSION.

The Association was called to order by the President, at a quarter past four o'clock.

On motion of Prof. Maisch, Mr. Spencer, the inventor of the improved filtering apparatus, was respectfully requested to prepare a description and explanation of his invention for publication in the proceedings of the Association.

The reading of the Queries was then resumed.

Query No. Twenty-one.—It has been stated that the poisonous properties of Rhus toxicodendron reside in a volatile alkaloid. Is this true? Is this alkaloid dissipated when the leaves are dried? Can it be isolated in a state fit for medicinal use, or can the properties of the leaves be preserved in some form as a pharmaceutical preparation?

In answer to this query Professor Maisch read an interesting paper which contained the results of important experiments. The Professor is of the opinion that the poisonous properties do not reside in an alkaloid, but that they form a distinct acid, which he names toxicodendric acid.

Referring back, the answer to query number one was listened to. The query reads:—

The seed of Cimicifuga racemosa are numerous and easily obtainable. What are their characteristic properties and chemical constituents?

Mr. E. C. Jones, of Philadelphia, who accepted the answer to the above, read the results of his experiments. From the experiments he finds that it contains tannic and gallic acid, sugar, gum, starch, fat, two resins, one soluble in alcohol and ether and the other only in ether, and salts of potassa and lime.

In place of query number two, Mr. Albert E. Ebert, of Chicago, read an elaborate paper on the sophistication of the rectified oil of amber.

The next was—

Query No. Eleven.—What is the most convenient form of apparatus adapted to common use, for regulating the temperature at or below 160, 140, and 120 degrees respectively, as directed in the evaporation of some of the officinal extracts?

Answered by P. W. Bedford, of New York, who exhibited some simple apparatus of his own.

The next in order was *Query No. Twenty-four.* Pumpkin seeds

have acquired some reputation as a remedy in tænia. Does this curative power reside solely in a fixed oil? If so, what is the best process for extracting it and of dispensing it for internal use?

A. Tufts, of Dover, N. H.. who had accepted to answer this query, was excused from so doing. Mr. Parrish made some statements on the subject, giving it as his opinion that pumpkin seeds were invaluable for this disease. Several other gentlemen spoke on the subject, the majority favoring pumpkin seeds.

To the next—*Query No. Twenty-six*—What is the best formula for Elixir of Valerianate of Ammonia, which shall be nearly free from valerianic odor and elegantly aromatized?

Joseph Roberts, of Baltimore, was not present, and therefore did not answer the query. Professor Moore, however, presented a formula extensively used in Baltimore.

Volunteer papers were at this time announced as in order, as the queries were disposed of. Mr. George C. Close presented a formula for a remedy for epilepsy. The paper was ordered to be placed in the minutes of the proceedings. Dr. Squibb next read an excellent and valuable paper on the quantity of alcohol necessary to be used in the preparation of extracts. The paper was accepted, and it was voted that it be published in the proceedings. Several gentlemen made remarks concerning the paper of Dr. Squibb, and the subject was discussed at length, as to whether it is best to follow the rules laid down in the pharmacopœia, or those of Dr. Squibb. Pending the discussion, at seven o'clock the Association adjourned until evening.

EVENING SESSION.

The report of the Committee on Specimens was next submitted. It was accepted and referred to the Executive Committee for publication.

An interesting discussion here took place on pure and impure saffron, and many rather queer confessions were made by several gentlemen. It appeared that safflower was generally sold for saffron, and it was asserted that the genuine saffron would not find purchasers.

Mr. Collins, of Philadelphia, exhibited a spine bag, and made some explanations concerning it. The bag is a patent of Dr. Patten, and is an English invention.

A volunteer paper was next submitted by James M. Mill, of Chicago, entitled "Fidelity to the Pharmacopœia."

Third Day.

FORENOON SESSION.

At half past ten o'clock the convention was called to order by the President.

The reading of volunteer papers was, at this time, again resumed. A paper entitled "The Production of Peppermint in Michigan," was read by Mr. Frederick Stearns, of Detroit. The same gentleman presented a short interesting paper on "Native Wines from the Garden Rhubarb Plant," manufactured by I. R. Mudge, of Belvidere, Ill. These papers were principally statistical. They were referred to the executive committee for publication. Professor Everett, of the New York College of Pharmacy, made some statements about and exhibited some specimens of magnesia manufactured by the American Magnesian Company. Mr. Wigand, of Philadelphia, read a paper entitled

"The obligations of Pharmaceutists in respect to the instruction of those in their employ." Dr. Bartlett read a paper from N. G. Bartlett of Chicago, on an "Automatic vacuum apparatus," with accompanying illustrations. All these papers were accepted and referred for publication.

It was voted that the next meeting of the Association be held in Detroit, Mich., on the fourth Wednesday in August, at three o'clock in the afternoon.

Professor Procter read the list of "scientific queries" prepared by the committee on that subject, with the names of the gentlemen who have accepted them for answer at the next annual meeting. Referred to the appropriate committee for publication.

FOURTH AND LAST DAY.

The Association was called to order by the President. Dr. B. W. Bedford, of New York, read his paper and exhibited his apparatus in reply to Query Number Twenty-five—"An essay on gas-heating apparatus adapted to the various purposes of the apothecary, so as to enable him to conduct his processes in or near the shop, which will combine efficiency with economy." The paper was accepted and appropriately referred.

The papers prepared by Dr. Pyle having arrived, they were directed to be entered upon the record.

Some unfinished papers from the last year were taken up and disposed of.

After the transaction of some unimportant business a paper was presented by Mr. Parrish, relative to the tax on alcohol in England, and the manner of licensing its sale. A long discussion ensued, during which the propriety or expediency of ascertaining if measures could not be adopted by which Congress will except Pharmaceutists from the tax on alcohol for scientific and medical purposes, was debated.

A resolution was adopted for the appointment of a committee of five, whose duty it shall be to take into consideration the whole subject relative to the internal revenue law in its relations to the objects of the American Pharmaceutical Association, with special reference to the alcohol question, with authority to consult with the committee of ways and means of Congress and the Commissioner of Internal Revenue, and report at the next annual meeting, and also requesting each individual member of the committee to report to their chairman, who shall report in full.

A motion was adopted authorizing the President to appoint said committee at his leisure, and that after appointing, he notify, at his earliest convenience, the gentlemen whom he may appoint.

After cursory remarks upon various topics, the minutes of the session were read by the Secretary, and the convention dissolved.

NEW LECTURESHIPS IN THE UNIVERSITY OF PENNSYLVANIA.—The following statement in reference to this liberal act of Dr. Wood is taken from the *Medical and Surgical Reporter* of July 8, 1865:—

"Publicity having been given to the proposed endowment of Lectureships in the Medical Department of the University of Pennsylvania, we will state the facts as briefly as possible, so far as they have transpired.

"The Trustees of the University of Pennsylvania, through the liberality of the distinguished Emeritus Professor of the Theory and Practice of Medicine in that institution, Dr. George B. Wood, as we are informed, have devoted the sum of $50,000 to the endowment of lectureships in the University on the following subjects:—1. Zoology and Comparative Anatomy; 2. Botany; 3. Mineralogy and Geology; 4. Hygiene; 5. Medical Jurisprudence, including Toxicology. We have heard the names of competent gentlemen mentioned in connection with each of the chairs, but do not as yet feel authorized to give publicity to them. The appointments will be made in November next, and the first course of lectures will be given the ensuing spring. Each lecturer is to receive a salary of $500 from the fund, and also all fees that may accrue from the sale of tickets, the fee not to exceed $10, and regular matriculants and alumni to be admitted free.

"This liberal action of Dr. Wood is entirely in keeping with his well-known views on the subject of medical progress. He has always been a friend of thorough education, and when a teacher and professor, always insisted on a close application to his studies on the part of the student, and a proper qualification for the discharge of the responsible duties of the physician on the part of the graduate.

"In no better way could he have shown his love of, and confidence in, the science of medicine, and his attachment to his Alma Mater, the venerable University of Pennsylvania, than in the establishment of these lectureships. The devotion of a well-earned fortune to so high, honorable and ennobling a purpose as the advancement of medical education, would serve to immortalize the name of this distinguished friend of medical progress, even if he had done nothing more to secure to him so eminent a position."—*Am. Journal of Pharmacy.*

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, SEPTEMBER 9th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	51	61	112
Ave. mortality of corresponding weeks for ten years, 1853—1863,	52.6	52.2	104.8
Average corrected to increased population - - - - -	00	00	114.41
Death of persons above 90 - - - - - - - -	0	1	1

PAMPHLETS RECEIVED.—Addresses at the Fifth Annual Session of the American Dental Association, by W. W. Allport, D.D.S., Daniel Brainard, M.D., N. S. Davis, M.D., at Chicago, July 25th, 26th and 27th, 1865.—Valedictory Address delivered before the Graduating Class of the Philadelphia Dental College, session 1864-65, by J. H. McQuillen, M.D., D.D.S., Professor of Anatomy, Physiology and Hygiene, March 1st, 1865.

MARRIED,—In this city, 7th inst., John Ryan, M.D., to Miss Mary J. Grealy.—At North Attleboro', 5th inst., G. C. Howard, M.D., of Middlebury, Vt., to Miss Georgie A. Smith, of N. A.—At Groton, 7th inst., J. N. Kerlin, M.D., of Media, Pa., to Miss Harriet Caroline Dix.

DEATHS IN BOSTON for the week ending Saturday noon, September 9th, 112. Males, 51—Females 61. Abscess, 2—accident, 2—anæmia, 1—apoplexy, 2—disease of the bowels, 1—inflammation of the bowels, 1—disease of the brain, 2—inflammation of the brain, 1—bronchitis, 2—cholera infantum, 12—cholera morbus, 1—consumption, 15—convulsions, 4—debility, 1—diarrhœa, 7—dropsy of the brain, 1—dysentery, 10—erysipelas, 1—scarlet fever, 1—typhoid fever, 1—hernia, 1—disease of the heart, 4—intemperance, 2—inflammation of the lungs, 4—marasmus, 9—old age, 5—paralysis, 3—peritonitis, 2—premature birth, 2—puerperal disease, 1—suicide, 1—teething, 2—thrush, 1—unknown, 6—whooping cough, 1.

Under 5 years of age, 53—between 5 and 20 years, 7—between 20 and 40 years, 18—between 40 and 60 years, 16—above 60 years, 18. Born in the United States, 81—Ireland, 28—other places, 3.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. LXXIII. THURSDAY, SEPTEMBER 21, 1865. No. 8.

SURGICAL CASES, FROM THE RECORDS OF THE CITY HOSPITAL, BOSTON.

REPORTED BY DAVID W. CHEEVER, M.D., ONE OF THE VISITING SURGEONS.

[Communicated for the Boston Medical and Surgical Journal.]

First Paper.—FIVE CASES OF CONSERVATIVE SURGERY OF THE UPPER EXTREMITY.

CASE I.—*Severe Laceration of the Hand; Recovery.*—(Under the care of Dr. Cheever.)—May 1st, 1865. F. A. R., æt. 22, while at his work in a mechanical bakery had his hand drawn in between two smooth rollers, used for rolling out crackers. A large, V-shaped, lacerated wound on the palmar side had torn off all the integuments of the palm, down to the palmar fascia, and crushed and carried away the muscles of the thenar region, comprising all the shorter muscles of the thumb. The palmar fascia was, fortunately, not opened. On the dorsum, the whole skin was lifted up from its cellular attachments, but not torn away; so that the finger being entered under the skin at the edge of the palmar wound, could be swept over the whole back of the hand, from the wrist to the commissures of the fingers, between the skin and the tendons, as if beneath a glove. There was no injury of bones, tendons, vessels or nerves.

Here, then, we had a severe lacerated wound of the soft parts, not implicating the deeper structures. How far the future usefulness of the hand might be impaired by the gluing together of the skin and subjacent structures seemed quite doubtful.

The ragged muscles were trimmed up, the edges of the palmar wound were brought nearer together over the palmar fascia, whose surface was cleanly dissected off by the injury. Four long counter openings were made through the loosened skin, in front and behind, to prevent the bagging of pus. The hand was placed on its ulnar edge in a tin gutter, and secured by adhesive straps, and the whole kept constantly moist with water.

May 3d, suppuration had begun, a slight blush extending up the forearm. He was ordered ʒ iij. tinct. ferri. chlor. daily. In five days more the condition had much improved. The stitches were all

away, a slough had separated near the thumb, and a little still remained; suppuration not excessive. At the end of a fortnight, his wounds were strapped daily with adhesive plaster. There was but little discharge from the counter-openings, and the skin on the dorsum was becoming adherent.

One month after the injury he was discharged, nearly well. A granulating wound, two inches long and three fourths of an inch wide, alone remained in the palm. Six weeks later he was seen again, when everything had closed. The motions of the fingers, both flexion and extension, were excellent, the thumb only being impaired by the destruction of its short muscles. He was again at work at his trade.

This case seems worth reporting, not for the depth, but for the extent of the injury, and the perfect recovery. It seems fair to conclude that the integrity of the palmar fascia saved the flexor tendons of the palm from adhesive inflammation; while on the dorsum, the separation of the skin from its cellular attachments must have taken place without denuding the extensor tendons to any great extent.

Case II.—*Compound, Complicated Fracture of Radius and Ulna; Recovery.*—(Under the care of Dr. Cheever.)—June 2d, 1865. Edmund C., æt. 31, while at work, had his right arm drawn into a leather-slitting machine, twisting it, and fracturing both bones of the fore-arm. The fracture occurred at the junction of the lower and middle third of the fore-arm, and both bones were driven through the soft parts and skin, producing two lacerated wounds on the dorsal side, the upper fragments projecting some inch and a half, divested of periosteum. The soft parts on the front of the arm were red and bruised as high as the elbow, but the vessels were uninjured. The patient looked like a young man of good constitution and temperate habits, and although there was considerable reason to fear a slough of the bruised tissues, it was decided to try to save the arm. The wounds were enlarged, some splintered fragments removed, the periosteum was stripped back from the upper fragments of both radius and ulna, and two inches sawed off with the chain saw. They were then gently returned to their places. The ends of the lower fragments were snugly bedded in the soft parts, and although the fractured surfaces were rough, the periosteum could not be much displaced, and they were left alone, since it was thought that they could not give rise to more irritation than in a simple fracture, provided the arm were kept at rest. The whole limb was now placed in a tin gutter splint, with holes for the discharges, and gently supported by a few adhesive straps. No bandaging or close apparatus was used throughout the case, but it was left as much open as possible, in order that it might be seen, and be kept cool, and unrestrained by constricting bands. It was loosely covered with a moist cloth. One third of a grain of morphia was given during

the night. The next day, the pulse was 60. In three days more there was free, healthy suppuration. A great ecchymosis of the palmar side of the forearm. Pain reported diminishing. Ten days after the injury he was up and about the ward, with a very moderate discharge. In three weeks he went home for forty-eight hours. In six weeks from the receipt of the injury the external wounds had entirely closed, and the case was reduced to a simple fracture. A very large effusion of callus had taken place around the seat of fracture, and entire recovery was a question of only a few weeks. He was therefore discharged, and directed to report weekly.

The early closure of these wounds must be ascribed to the power of vital resistance in the patient. But the large callus, and the escape without necrosis, would seem to be due to the preservation of the periosteum.

Case III.—*Extensive Laceration of the Hand by the explosion of a Pistol; Recovery.*—(Under the care of Dr. Cheever.)—Daniel S., æt. 14, while attempting to fire off a pistol, on the 4th of July, holding the barrel in his left hand and pulling the trigger with his right, it burst, and lacerated the left hand. The fore-finger, fractured close to its articulation with the metacarpal bone, was left hanging by only one tendon. The metacarpal bone was stripped of soft parts and periosteum nearly its whole length. There was a very considerable loss of skin and soft tissues, and they were blown full of powder. The middle finger was torn near the tip. The thumb had sustained what almost seemed an irreparable injury. The ball of the thumb and the thenar muscles were torn up, so that the articulation of the metacarpal bone with the trapezium was entirely exposed. This joint was not only opened, but its synovial capsule was wholly gone. The articulating surfaces were entirely apart, as if separated by the knife, and laid clean and bare in full view. The tendon of the flexor longus pollicis was denuded also for an inch and a half. The extensor tendons (ossis metacarpi, primi et secundi internodii pollicis) were uninjured. So were the dorsales pollicis arteries and the branches of the radial nerve. The radial artery and two smaller branches were tied. The skin on the dorsum was untouched. The whole thumb was attached to the hand only by the tendon of the flexor longus, the extensor tendons, and integuments and soft parts on the dorsum and part of the side. On these it could be freely hinged back, so that it lay upon the back of the hand, the nail pointing towards the wrist. The injured parts around the thumb were fortunately free from powder, and were clean and dry. As the thumb may be justly regarded as of more consequence than several fingers, the question suggested itself at once, whether there was any hope of saving it. In view of the youth of the patient and the great recuperative powers of Nature at that age, and considering also that it would be a trifling matter to remove it at

any later period should it become necessary, it was decided to make the attempt.

The fore-finger and nearly the whole of its metacarpal bone were removed. The ragged soft parts were trimmed up. The thumb was laid back in its place, and retained by adhesive straps passing round the hand. Several sutures were put in, but the wound could not be brought together with integument but a limited part of its extent. A cold-water dressing was applied, and the whole supported in a tin splint. The patient slept the second night without an opiate; the hand looking well.

July 9th.—Very little suppuration. Sutures removed, and all ligatures except radial one. Wound looks well; healthy granulations beginning. Thumb held firmly in place by daily dressings with adhesive plaster. Cold-water dressing continued. In three weeks there was moderate union, and a little motion of the thumb by the long flexor tendon. The whole wound granulating healthily. In six weeks the wounds were nearly healed. the thumb was soundly approximated to the metacarpal bone of the second finger, and its motion was very considerable. The preservation of a useful member was no longer a matter of doubt.

Sept. 4th.—Two months after injury. Hand in excellent condition, good motion being attained.

Case IV.—*Crushing, with Laceration of Right Hand, by Pile-driver; Recovery.*—(Under the care of Dr. Buckingham.)—March 7th, 1865. Alex. McQ., æt. 23, while at his work driving piles, the pile-hammer, weighing seventeen hundred pounds, fell a distance of one foot, catching his hand between it and the pile, the shock being somewhat averted by the block on top of the pile. Hand considerably swollen; fingers warm; a deep wound on the inner side of thumb, running back towards the wrist, and laying bare the first and second phalangeal articulations of the thumb, but not opening the joints; fracture of second phalanx; deep ragged wound in palm; skin torn off from one half the surface of the back of the hand and the index finger; all the soft parts badly bruised; profuse hæmorrhage from wound of thumb; no arterial jet. Bleeding checked by cold. Pain intense. Laudanum, p. r. n. Hæmorrhage recurring in the night, pressure over the radial and ulnar failing to arrest it, a tourniquet was applied to the brachial.

March 8th.—Hand swollen and livid. No bleeding. Dressings and tourniquet removed. Etherized, and hand examined. Bandages re-applied, and hand kept raised, with elbow bent.

9th.—Fair night. No bleeding. Swelling increasing. Three long incisions made on dorsum of hand. Tissues infiltrated with effused blood.

11th.—Another incision required. Palmar wound sloughing. Constitutional state good. Dressings removed; hand to be treated by exposure to the air alone.

12th and 13th.—Patient sitting up, and appetite better. Small collection of pus let out over thumb.

14th.—Commencing to suppurate more freely. No dressings, to great surprise of patient.

17th.—Extensive sloughing of back of hand, and some of palm. First phalangeal joint of thumb opened. Appetite not so good. Wounds dressed with creasote ointment.

20th.—Beginning to granulate. Compressed with broad adhesive straps to prevent burrowing of pus. Ordered extra diet and ale.

24th.—A large amount of slough removed. Strapping continued.

29th.—Doing well. Wound contracting and granulating.

April 8th.—Improving, under strapping.

12th.—Abscess opened over metacarpal bone of thumb.

20th.—Doing well. Last phalanx of fore-finger removed, as it was quite loose.

30th.—Loose bone removed from tip of thumb.

May 18th.—Strapping omitted. Fingers reduced in size; begins to flex them. Thumb healed. Wound on dorsum only three fourths of an inch wide. Ulceration, as if from necrosis, at end of fore-finger.

May 29th.—End of fore-finger slit open, but no dead bone found.

June 5th.—All sores nearly healed. Discharged, after three months' treatment.

The hand remains considerably swollen and infiltrated. The thumb a little shortened by loss of bone. Flexion moderate, but improving. There seems just cause to believe that by the end of a year the hand will have become a very useful one. Certainly, none of its essential functions are irreparably impaired.

Case V.—*Compound Fracture of Fore-arm, with extensive Laceration; Recovery.*—(Under the care of Dr. Buckingham.)—Jan. 24th, 1865. Bernard McI., æt. 52, a moderate drinker. This morning got his right arm caught in a gearing, producing a compound, comminuted fracture of the ulna in its lower half. Integuments torn off the greater part of the palmar aspect of fore-arm, from wrist to within two inches of elbow, exposing and badly lacerating the flexor muscles. Skin on dorsal aspect uninjured. Radial pulse good. Can flex his fingers. But little blood lost. Treated until following day by bandaging and opiates.

Dr. Buckingham determined to attempt to save the arm; and the patient having been carried into the amphitheatre, he stated the *pros* and *cons* to the medical class. The age and habits of the patient were against him, and the injury was a bad one. On the other hand, the hand was warm and the pulse good; the patient was poor, with a large family, and he proposed to remove the injured portions of the ulna, and to try to preserve a useful hand, with the radius alone. By a slow and careful dissection, the periosteum was removed from

the ulna, and its broken fragments extracted. The periosteum was stripped off from the upper fragment, and the bone smoothly divided with a chain saw. The lower articular end of the ulna was also dissected out. Nearly one half the shaft was removed. There was but trifling hæmorrhage. Cold-water dressing applied. In the afternoon, dressings were removed, the elbow flexed, the hand raised, and the back of the arm fastened to a pillow and cradle. In this position it was very comfortable, and all pressure on the wound avoided. From this time until March 7th, *about six weeks, the arm was treated without any dressing whatever, and freely exposed to the air.*

Jan. 27th.—Pulse 72. Tongue clean. Sleeps well. A large exudation of serum and lymph is coating over the wound.

30th.—A moderate amount of sloughing. Pulse 92. Delirious in night. Diet increased—beef-steak and ale.

Feb. 2d.—Pulse 68. Sloughing better. Wound covered with a brown scab of dried pus, painless, inodorous. Slough and scab, in separating a little, caused a giving way of the ulnar artery, which required a ligature.

5th.—Wound looks remarkably well; granulating around edges.

8th.—Position becoming irksome. Warm-water dressing for twenty-four hours, to remove scab, in order to apply a splint.

15th.—Fore-arm drying up nicely.

19th.—Still a little sloughing among the tendons.

21st.—Arm put on a straight splint.

23d.—Pain and swelling. Splint removed.

27th.—Confinement beginning to tell on general health. Much pain along course of ulnar nerve.

March 6th.—Appearances of necrosed bone over lower end of radius. Wound contracting. Some burrowing of pus, treated by pressure with roller.

13th.—Strapped with adhesive, daily, and bandaged, henceforward.

16th.—Sitting up and walking about, with arm on a pillow.

27th.—Suppuration much less. Wound contracting. Swelling subsiding. Doing well.

April 27th.—Constant improvement. Granulations too exuberant; treated with alum and strapping.

May 27th.—Allowed to go home for a week. Every way improved.

June 22d.—Five months under treatment. Discharged. Wounds nearly closed. To return weekly for inspection.

July 10th.—Seen to-day. Wound closed, except two spots the size of a five-cent piece. Swelling of hand subsiding. Rotation of radius quite good. Fingers can be moved by passive motion; hitherto they have been let alone, because motion tore open the cicatrix. To begin to use them now. Every reason to anticipate a very good hand.

REPORT UPON THE EPIDEMIC OCCURRING AT "MAPLEWOOD YOUNG LADIES' INSTITUTE," PITTSFIELD, MASS., IN JULY AND AUGUST, 1864.

By Drs. A. B. Palmer, C. L. Ford and Pliny Earle.

[Continued from page 140.]

The committee have received both written and oral statements of the offensive odors from the drains, perceived upon the streets.

Some of those rooming in the west building complained of the heat, the steam and the odor which came from the laundry and penetrated the apartments.

Though some of the dormitories were small for the number occupying them, and were not provided with any special or artificial means of ventilation, yet they were as they had been in previous seasons of health, and during the summer time could have been kept absolutely closed only a moderate portion of the time. Compared with other similar institutions, the crowding was not excessive.

The foliage about the buildings from shade trees and vines covering the verandas was considered by the committee as being in some cases excessive, and, as before stated, they recommended that a portion of it should be removed.

Bathing-rooms and tubs were provided in the building, though many did not use them, preferring to practise such ablutions as they could in their own rooms. We have no evidence that imperfections of the bathing apartments, if they existed, had anything to do with the sickness of the pupils.

Though the discipline of the school was strict, and the requirements for intellectual labor and application were not light, they did not differ from those of former years; were much like those of other schools of a similar character, and could scarcely be regarded as excessive.

The exercises of the gymnasium were taken for half an hour immediately before dinner four times per week, with no period of rest between such exercises and the forenoon of study and recitations; and some thought that their appetite and digestion were impaired by this; but the practice was the same as during previous years of freedom from fever, and we are unable to say that it had anything to do with the sickness.

To the subject of the diet of the institution, the committee, as was their duty, gave careful attention, but the facts their investigations elicited would not justify the statement that deficient or improper alimentation acted as a cause of the sickness.

Maplewood is supplied with water, as is the rest of the village, from a mountain lake through the hydraulic works, and during the hot weather ice was used in that for drinking. For some days in July the supply from this source was scanty, and these grounds being higher than most of the village, there was a failure of the hy-

draulic water at the Institute. Water for cooking and drinking purposes was brought during this interval from a neighboring well—the same as used by several other families without injury or complaint; but the water for washing was supplied to the rooms from cisterns on the premises, which had long been unused, and complaints were made of its unpleasant odor. These complaints, however, were by no means general, and the committee have not sufficient facts to justify them in concluding that the water was in any way a cause of disease. The condition of this cistern water did not fail, however, to attract attention. It may be proper to state that one pupil, and one only, complained that, for a short time, the drinking water was not good.

Pleasure excursions were not unfrequently taken, by the pupils, about the neighboring country, in vehicles kept at the establishment for that purpose, and other proper recreations were allowed; and the pupils generally expressed themselves as having been treated with much kindness by the Principal and the teachers.

These the committee regard as all the material facts of a strictly local character having any important bearing upon the health of the inmates.

Which of these could have acted either as predisposing, exciting, or collateral causes of the deplorable results that have occurred?

To solve this question it will be necessary, first, to establish the character of the disease; then, to present, from the most reliable medical authorities, the causes of such form of disease; and, afterwards, to compare the facts in the case in hand with the authorities and established principles bearing upon it.

That the disease, in the mass of cases, was typhoid fever, or abdominal typhus, or, as called by Dr. Murchison and others, "pythogenic fever," there can be no doubt.

The committee all saw some of the cases, and one of this number attended several of them through their protracted course; and although no opportunity was presented to them for verifying the diagnosis by *post-mortem* examinations, and they are not aware of such having been made in any of the cases, yet the symptoms, though varied and in some cases peculiar, were so unequivocal as to cause fifty-six cases to be pronounced typhoid fever by quite as many different physicians, without any previous concert or understanding. In some of the cases there may have been, and indeed there appeared to have been, a malarious element, and following a present custom, such might have been styled "typho-malarial"; but the whole history of the disease showed the typhoid to be the *predominant* element—the essential characteristic—and, without lengthening the report by entering into details of proof, the fact that the disease, whatever complications might have existed, was essentially typhoid fever, may be regarded as established.

It would be impossible to bring this report within reasonable limits, were we to discuss fully the various questions connected with the

origin and propagation of typhoid fever. Although various theoretical views are held as to whether the poison producing the disease is generated in the bodies of the sick, and communicated from them to the well, or whether it is generated in sources exterior to the bodies of fever patients, yet all authorities maintain that a peculiar poison is concerned in its production.

Those who hold to the doctrine of contagion admit that, to give such contagion efficacy in the production of wide-spread results, filth or decaying organic matter is essential; while those who sustain the theory of non-contagion—the production of the poison from sources without the bodies of the sick—contend that it has its entire origin in such filth—in decomposing matter, especially in fermenting sewerage and decaying human excreta.

The injurious influence of decomposing azotised matter, in either predisposing to or exciting severe disease, and particularly typhoid fever, is universally admitted among high medical authorities. The views of Dr. Carpenter on this subject are too well known to medical men to need full elaboration. His doctrine, so clearly stated and so amply illustrated by facts, is that decomposing materials in the system, whether generated and retained there or taken in from without, either in water or food contaminated with foul matters, as sewerage, &c., or in the air by night-soil and sewerage emanations, either themselves produce disease or serve as the nidus for the operation of specific or zymotic poisons, such poisons as produce fevers, cholera, diarrhœa, dysentery and the like.

After giving many other cases showing the effect of foul emanations in the production of fever, cholera, &c., Dr. Carpenter says:—

"The following case may be added in proof of the potency of an atmosphere charged with putrescent emanations in rendering the system liable to the attacks of zymotic diseases of various kinds.

"A manufactory of artificial manure formerly existed immediately opposite Christ Church workhouse, Spitalfields, which building was occupied by about 400 children, with a few adult persons. Whenever the works were actively carried on, particularly when the wind blew in the direction of the house, there were produced numerous cases of fever of an intractable and typhoid character; a typhoid tendency was also observed in measles, smallpox, and other infantile diseases, and for some time there prevailed a most unmanageable and fatal form of aphthæ of the mouth, ending in gangrene." Many deaths occurred.

"The proprietor of the manufactory was compelled to close his establishment, and the children returned to their ordinary health.

"Five months afterwards, the works were recommenced. In a day or two subsequently, the wind blowing from the manufactory, a most powerful stench pervaded the building. The night following, 45 of the boys, whose dormitories directly faced the manufactory, were again suddenly seized with diarrhœa; whilst the girls, whose

dormitories were in a more distant part, and faced in a different direction, escaped.

"The manufactory having been again suppressed, there was no subsequent return of diarrhœa."

Dr. Williams, whose Principles of Medicine are in the hands of so many, in speaking of these sources of filth and foul air, says:—

"The soil which drains from habitations contains, in addition to excrement, dirty water, the washings and remnants of animal and vegetable matter used as food, and other offal. All these are mixed together and stagnant in the corrupting slough that is retained in cess-pools and privies, or that is carried into sewers. Every ill-drained house has a Pandora's box ready to pour forth its evils when occasion offers, and always oozing them out in degrees sufficient for the impairment of health.

"These materials continually poison both air and water; and typhoid fever, diarrhœa, cholera, dysentery, dyspepsia, inappetency, general weakness and mal-nutrition are the results of their pestiferous operation acting in different degrees."

Dr. Stramm, of Berlin, Germany, who has given many years of his life to the study of epidemic diseases in different parts of the world, believes in the possibility of annihilating nearly all such diseases by proper attention to cleanliness and other hygienic measures. He says: "Before erecting statues, building museums, and buying expensive pictures, towns should be relieved of bad odors and fermenting putrescence;" and adds, "that good privies are far higher signs of civilization than grand palaces and museums of art." Among many other facts enforcing his views, he mentions that in certain wards of the Vienna General Hospital there was an epidemic of fever in the winter of 1862–63. In the wards on the second floor the disease prevailed by far the most extensively, and it was found that the pipes for the escape of gases from the cess-pools opened just above that floor in a garret which was quite closed. On proper ventilation the disease soon ceased.

From numerous instances, ancient and modern, Dr. Stramm concludes that wherever there is a bad odor there is, as a rule, *materies morbi;* and that when there are bad conditioned water-closets and cess-pools, poison will penetrate into dwellings, and when this is the case to the requisite extent, epidemics inevitably follow. He says that when the capital of Egypt was moved from Thebes to Memphis—from the upper country to the marshy lowlands, where proper drainage was impracticable, and where the infection of the air was carried on in an almost systematic manner—the empire gradually declined; and he quotes Baron Liebig in ascribing to the bad system of sewerage adopted at its capital, the fall of the Roman Empire.

Dr. E. D. Mapother, Professor of Hygiene, and Medical Officer of Health of the city of Dublin, says:—"Typhoid fever is about the most preventible of diseases, yet of this affection 140,000 cases occur, and

at least 20,000 young persons, including many of the flower of the people, die every year in England." He attributes it to foul emanations, and says there is much greater risk of the disease being communicated from the decomposition of materials and the production of poison in faulty sewers, than from the atmosphere about patients; and urges the use of disinfectants, and improvements in the condition of sewers and privies as the preventives of this disease "born of putrescence."

One of the latest and perhaps the highest authority on this subject—Dr. Chas. Murchison, of the London Fever Hospital—has applied the term "pythogenic" (literally, "born of putridity") to typhoid fever; and so strong is the conviction as to the particular form of decaying matter most frequently producing it, that the name of "night-soil fever" has been given to it.

It is regarded by Murchison and others as an endemic disease—that is, as a disease belonging to, and consequently generated in, *localities.* It occurs more frequently, especially in New England, during the autumn, and it is often unusually prevalent after summers remarkable for their dryness and high temperature.

It is more likely to occur in youth and adolescence than in later periods of life, and is not so particularly increased as is typhus fever by intemperance, fatigue, overcrowding and deficient ventilation, or by poverty and deficiency of food—though all of these have some effect in predisposing to it.

The question whether typhoid fever is ever properly contagious, that is, whether the poison producing it is generated in the bodies of those sick with the disease and communicated to others, producing the like affection in them, has long been discussed, but is not yet fully settled. It is always difficult to say whether a disease is communicated by contagion from one person to another, or not, when both have lived in the same place and been subjected to the same general influences. Andral, perhaps the most accurate of French observers, declared that he had not seen typhoid fever exhibit the slightest contagious character; and Chomel stated that not more than one in a hundred, in France, where this has long been the prevailing fever, believed it to be contagious.

At the present time, professional opinion in France is more divided. Trousseau, whose authority is very high, regards it as probably contagious; but only so under peculiar circumstances—under certain special conditions, while he admits that many facts seem to point in the other direction. Lebert, one of the most recent and highest among German authorities, says that, within his large field of observation, he has found the abdominal typhus (typhoid) very little contagious; at all events, incomparably less so than the exanthematic, or English typhus proper; and less contagious in endemic cases than in wide-spread epidemics. He finds, especially, that whilst smallpox and typhoid patients are in the same hospital, every

year, the typhoid convalescents take the smallpox, but the smallpox patients do not take the typhoid. He regards putrid and mephitic emanations as among the causes which have a decided influence in the production of the disease, and says:—"That local emanations from the earth, local injurious substances eluding our search, have not seldom a share in producing the disease, is proved by the fact that, sometimes, local causes of many years' standing cease to develope their injurious properties through hygienic improvements." He says, again:—"Too exhausting labor, together with poor dwellings and insufficient food, renders the system more susceptible."

Professional opinion in England and in this country is divided. Very few, however, hold that the disease is chiefly propagated by contagion. A very large portion contend that it is often generated spontaneously, or independently of the sick; and it has long been held, in a vague way, to be produced by poisons developed chiefly by animal decomposition, as malarial fevers so evidently are from changes in vegetable matter.

In this country, particularly, where the disease so frequently breaks out in a scattered population, where there is no possibility of contagion, nearly all believe that it is generated *de novo;* and it is inferred that if this is so in some cases, it is likely to be so in all; as, very generally, when the disease occurs in one person, after another has had it in the same locality, both have been subjected to the same external influences, and may therefore have been affected by the same causes, one being affected only later than the other. Although almost universally held not to be generally produced by contagion, yet the spontaneous origin of typhoid fever has been regarded, until within not many years past, as involved in obscurity—its particular procuring cause having been looked upon as vague and uncertain. Emanations from sewerage and putrefying animal matters have long been considered causes of fevers, as has been seen; but it was reserved for Dr. Murchison to show, by a large collection of facts, that fevers produced by such emanations are always typhoid, and not typhus, and that such emanations are the common causes of such fevers. A few of the many facts upon which he based his conclusions may here be presented, some of them in a condensed form, as throwing light upon the questions which the committee have undertaken to investigate.

In August, 1829, of 22 boys in a school at Clapham, England, 20 were seized, within three hours, with fever, vomiting, purging and excessive prostration. One other boy had been seized with similar symptoms two days before, and died comatose, in 23 hours; another boy died in 55 hours, and the rest recovered. A careful investigation could detect no other cause than the opening and cleaning out of a drain which had been choked up many years, and which, when opened, emitted an offensive odor. This drain was at the back of the house where the boys were, and its opening was watched by them.

Its contents were spread upon their play-ground. The symptoms and *post-mortem* appearances were those of typhoid fever.

In 1838, a circumscribed typhoid fever broke out in Birmingham, England. About 50 cases occurred in the immediate neighborhood of a small stream, which was nothing more than an open sewer. The preceding season had been very hot, so that the stream was nearly dried up, and in some places almost stagnant. It disengaged extremely fœtid odors, especially during the night, which were complained of by the inhabitants.

In the same year typhoid fever prevailed in the Commune of Prades, in the Department of Ariège, France. Of 750 inhabitants, 310 were attacked and 95 died. The cause was traced to a stagnant pool, which was the receptacle of dead animals and of all the sewerage of the district. The outbreak was preceded by damp, warm weather. Three times the pestilence returned, and always when the wind was blowing over the infected water.

Another circumscribed outbreak of this same fever occurred in an isolated farm-house in the thinly peopled county of Peebles, N. B., in 1846, as recorded by Dr. Christison. Every one of the fifteen residents was seized with the fever, and three died. Many of the servants who worked on the farm during the day were also affected, but none communicated the disease to their families, who did not visit the farm. The cause was traced to the drains and sewers, all of which were found closed up and obstructed by the accumulated filth proceeding from the privies and the farm-yard, the effluvia from which was very offensive.

About Easter, 1848, a formidable outbreak of this fever occurred in the Westminster School and the Abbey Cloisters, in London. It produced a perfect panic in the neighborhood, particularly because of its central situation and because it affected "the better classes." Within a little more than eleven days it attacked thirty-six persons, three of whom died; and though so many less were affected and died in this case than at Maplewood, a large portion of the people of London, and indeed of England, were agitated by the event, and it has become classical under the name of the "Westminster fever." Shortly before its appearance there were a few days of peculiarly hot weather, and a disagreeable stench was complained of in the houses in question. It was found that the disease followed very exactly, in its course, the line of a foul and neglected sewer in which fæcal matter had been accumulating for years, without proper exit, and which communicated by direct openings with the drains of all the buildings in which the fever occurred. The only exception was in the case of some boys living in a house at a little distance from those in which the drains opened; but they were in the habit of playing, every day, in a yard in which were gully-holes opening into the foul drain.

This case was minutely inquired into by the most eminent physicians of London, and the Metropolitan Sanitary Commission gave it as their decided opinion that the epidemic arose from the bad state of the sewers and drains of the precinct, and especially from the foul condition of the large sewer described.

In the autumn of 1852 a typhoid fever broke out in Croydon, England; and of a population of 16,000, 1800 were attacked and 60 died. The report of eminent medical men to the Secretary of State of England, who took official cognizance of the affair, showed that the escape of sewer miasm, through imperfections in the sewerage drain-pipes, had been influential in producing the epidemic.

In November, 1853, in Cowbridge, Wales, an outbreak of typhoid fever suddenly occurred, under very peculiar circumstances. Two balls had been held at the hotel of the town, and were attended by about 140 persons from all parts of the surrounding country; and, shortly after, at their homes, many of these persons were attacked, and none others, and eight died. Poison in the food or drink was suspected; but the persons were attacked too long after the event for this supposition; and an investigation revealed the fact that a foul privy was in a passage leading from the house to a stable, and the loft over the stable had been used as a supper-room at the ball.

The local origin of the disease was here completely proved; though the emanations from the privy as the cause was not so completely demonstrated. Some condition about the stable may have contributed to the result.

In the autumn of 1857 enteric fever broke out in Fleet Lane, London, while a sewer was being constructed. The sewer was open from June 29th to October 30th, and, during all this time, the inhabitants complained of the offensive smell. Soon after the sewer was opened diarrhœa began to appear, and enteric fever followed. Of 140 families in the lane, hardly one escaped. Those who investigated the subject attributed the fever to sewer miasms. It appeared soon after the sewer was opened: it disappeared when the sewer was closed; and, during the whole of the time, it was confined to the lane and its immediate neighborhood.

In the fall of 1858 an epidemic of typhoid fever prevailed at Windsor, England. As occurring in the immediate neighborhood of one of the royal residences, Windsor Castle, it was made a subject of special inquiry by the Medical Officer of the Privy Council. Within four months 440 persons—about one twentieth of the whole population—were attacked, and 39 died.

The disease seized rich and poor alike, and the cause seemed clearly to be traced to the escape of sewer gases, through defects in the drain, into the residences of the people attacked. There was a separate sewer for the Castle, which was kept in good condition, and no case of fever occurred there. Places only a street apart, but supplied, respectively, from the defective town-drain, and the

perfect Castle-drain, in the one case suffered severely, and in the other escaped entirely.

Foreign cases of this kind which have found places in the books and journals, showing the influence of foul emanations in causing typhoid fever, might be multiplied; but these, abstracted and condensed, as already intimated, from Dr. Murchison's recent and almost exhaustive treatise on the Continued Fevers of Great Britain, will suffice.

[To be continued.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, SEPTEMBER 21, 1865.

Disease a part of the Plan of Creation.*—Such is the somewhat startling title of the address by Dr. Cotting, read before the Massachusetts Medical Society at its last annual meeting. It is an address calculated to draw forth the most opposite opinions from the medical profession, according to their original mental constitutions and habits of thought—to be regarded by one class as the extreme of professional heresy and scepticism, and the very essence of medical philosophy by the other. Especially must this be true of those who formed their opinions of the discourse as it was delivered, the great weight of argument and illustration being, singularly enough, presented in the numerous notes, which constituted no part of the address as originally read. Startling as is the heading of this discourse, however, we think that the shock will be very much diminished to the reader who gives it a candid and careful perusal from beginning to end.

Dr. Cotting opens his essay with a distinct recognition of the odium which he runs the risk of incurring in certain minds by the position which he assumes, frankly declaring his willingness to meet the consequences which any faithful searcher after truth is liable to bring upon himself in a world so much given to routine as ours. He calmly confronts the stigma of heresy and the frowns of men of opposite views, in the hope that, thrown out in the capacity of a picket, while he incurs the peculiar dangers of such an adventurous position, he may do some special service to the cause of truth, and by his solitary shot bring down some single resisting error. Taking this stand, he proceeds at once to grapple with the great question of the origin of disease, so closely allied to that other great question which has exercised the minds of religious men for so many centuries, of the origin of evil, especially of moral evil. He naturally meets at the outset the popular idea that any departure from a condition of health is due to the infraction of some fixed law of health. The truth of this view he at once disputes, and opposes it with the parallel instance, as he considers it, taken from the New Testament—where the Savior replies to the inquiry, "Did this man sin, or his parents, that he was born blind?" "Neither hath this man sinned nor his parents, but that

* Medical Communications of the Massachusetts Medical Society, Vol. X., No. V., 1865.

the works of God should be made manifest in him." As in this case he claims that sickness in general is not the result of disobedience to the divine law, but constitutes a distinct part of the plan of creation from the beginning, and is the result of the operation of divine law.

On taking up such a discussion, one sees at once branching off in different directions some of the most abstruse and difficult questions which have exercised and which still exercise the ingenuity and wisdom of thoughtful men. The immense questions of the relation of the Deity to the Universe, whether as the original author of all things created, subjected at their creation to immutable laws which govern and will continue to govern all the events of time until the end—whether the steady operation of these laws is ever interrupted by the direct interposition of the Almighty, or special providences—or whether He always acts, at all times, by immediate agency, personally, and by no second cause. These are most solemn and momentous questions, belonging rather to the domain of theology, and we shall not presume to discuss them here; but it will be readily seen how closely the settlement of the question started by Dr. Cotting is related to these grave inquiries.

To establish his point, Dr. Cotting goes back to the earliest geologic ages for evidence. In the pathological museums of the fossil-bearing rocks, the records there preserved of restored injuries to the bones of the pre-Adamite denizens of our sphere, of caries and necrosis, of marks of extensive laceration recovered from, he finds irrefragable proof that life, in its widest sense, has always been exposed to casualties and disease, long before man, with his moral and intellectual responsibilities, was created. There is but one step in the argument from these facts to the conclusion, that their existence must have been a part of the plan of creation—it being, of course, taken for granted that there *is* a plan of creation. So, also, he shows, from the facts of disease in the living races of animals, that no infraction of law is to be charged on the unfortunate sufferers, who are by their very nature excluded from all accountability to laws of any kind. Passing to the diseases which affect mankind, Dr. Cotting shows by numerous examples how difficult it is in many very important instances to trace the prevalence of certain diseases to any specific violation of what we consider laws of health or moral laws, or in fact to any specific cause. Take any of the epidemics which have devastated the earth; how often does it happen, he says, "that they confound all our conceptions of hygienic laws, as well as our preconceived notions of their treatment"! The fact of their prevalence under such circumstances, as well as the regularity of the phenomena which characterize any well-known disease—one of the exanthemata for instance—he regards as unmistakable evidence of design, as much so as the germination of a seed or the course of the seasons. This is further illustrated by other phenomena of disease, such as the mysterious period of incubation of many of them, the inexplicable occurrence of metastasis, the changing features of acute rheumatism, the extraordinary susceptibility of some persons to certain diseases and the equally extraordinary exemption of some from the usual consequences of exposure to others—the prevalence of certain diseases at certain seasons of the year, the geographical limits which enclose some, the unexplained variety in the type of well-known diseases as they appear

from year to year, the general averages of sickness and mortality—all these are proofs "that the idea of diseases must have originated in the Creator's mind, and its development formed a part of the Plan of Creation from the beginning."

If this be true, some will say, the profession of the physician is a mere superfluity. Diseases and epidemics sweep over the earth by fixed primitive laws—what use for man to oppose his petty strength to the divine will! Nay, what mockery and impiety is it to attempt it! Better to sit with folded hands, with the Mussulman, and say There is but one God! and resign all events to the irresistible sway of an indiscriminating fatalism. But this is not Dr. Cotting's deduction from his line of reasoning. True, he recognizes the divine law, but sees in it only an added stimulus to more earnest study of its workings. A more thorough comprehension of the processes of disease when left to its own workings must give to the industrious student the greater power to guide and modify them. He does not deny that the action of the general laws of nature may be to some extent controlled by the agency of man. The common experience of every-day life shows this in a multiplicity of ways. Every step that we take overcomes the action of the force of gravity through the agency of another law, that which causes muscular contraction. So that the area of man's labor and study is by no means curtailed by the conclusions to which his arguments have brought him. Rather is it extended, requiring as a foundation of our knowledge of how much power we have to resist or modify the primal law, a complete knowledge of the exact operation of that law. Thus Dr. Cotting emphasizes the great importance of a student's learning what would be the probable issue of any complaint if allowed to follow its natural course. "But," he well adds, "how small a proportion of the profession could consistently practise their calling for a single day, were this test strictly exacted!" Nevertheless he persists that the highest standard of medical education will not be attained to until the student has this opportunity of studying pure disease, without any interference in the way of drugs. He repudiates the idea that disease is "an evil only to be expelled from the system by some other power, the *vis medicatrix*, for example," but maintains "that it is one of the attendants of life, instituted in the beginning." The corollary which he draws from all this is as follows:—

"This doctrine being accepted, the proper acquisition of our art will demand of students, in the first place, a thorough knowledge of the body in its healthy condition—its organic structure, its outward form, and its internal functions; and secondly, the investigation of the natural phenomena of disease *undisturbed by medication*, as a necessary preliminary to its proper management. It will require of them also a careful study of the operations of the mind as affecting the body, and their mutual reactions upon each other, in health as well as in disease—health and disease being parts of one great Plan, and often intricately involved in each other. In these directions medical education has been deficient, and subsequent attention in after-life remiss. Let coming students take warning from the deficiencies and failings of those who have preceded them. Let them thus, properly grounded, and not till then, proceed to study the effects of accepted remedial agents. Every step from such a base will be a true progress

for themselves and their science, no disappointment or scepticism ensuing. Every advance in this way will be in the right direction—*nulla vestigia retrorsum.*"

And what thoughtful physician will have the hardihood to deny the truth of the following passage?—

"While admiring the activity in our schools, the facilities of instruction and of clinical observations at our hospitals, the zeal of societies, the energy of individuals, and all the various helps to professional advancement, now so multiplied and abundant, one cannot but regret the still prevalent tendency to recur so readily to second causes, and to impede the advancement of medical science by claiming for it more than is consistent with actual truth. The medical press, so often boasted of as the great disseminator of medical knowledge, is still too often the vehicle of false philosophy and unworthy assumptions. False facts, false reasoning, and nonsequitur conclusions fill up a large portion of periodical publications. Even the more stately volume seems incomplete without its remarkable cases selected for an object, and its infallible formulæ, which perhaps have never had a trial. An author who shall candidly relate his own experience in ordinary cases, of expectations disappointed and unsuccessful issues following the employment of reputed infallible agents (and such cases only), would richly deserve, if he did not receive, the thanks of the profession, and be indeed, 'more than armies to the common weal.'"

In all this we do not find the heresy or destructive radicalism which it seems to present to some minds. We think that much of it accords with the popular sense of the course of an established disorder. How common is it for a patient to ask, nowadays, "Dr., how long must this disease run?" And how easily do most rational people acquiesce in the announcement of the physician, even when not given in response to such an inquiry, that he can do nothing to cut short the complaint. The public at large very generally appreciate the operation of self-limitation in disease, and as a general thing, we really believe, have more confidence in the man who appears to thoroughly understand the phenomena, than one who promises great results from the action of medication.

It cannot be denied, however, notwithstanding the mass of rubbish which represents what was once thought to be truth in therapeutics, that a steady progress has been made, especially of late years, in arresting or modifying disease by the action of medical agents. One such fact is argument enough for an unlimited hope for the future. And although we may not now be able to say why Asiatic cholera has started anew from its home in the east on its western march of desolation; or why diphtheria sweeps away nearly every inmate of one dwelling, haunting the habitation for months like a destroying angel, and like that fatal messenger of heaven in the days of Moses, passing over unscathed other surrounding habitations to light with similar annihilating power on others beyond; or why an epidemic of scarlatina one season spreads terror through a whole community by its fatal ravages, and another year scarcely keeps the objects of its selection within doors, yet all this mystery is only an added stimulus to the devoted student to more thorough and patient investigation. The apprehension which any destructive epidemic now inspires can hardly

exceed that which once accompanied the march of smallpox; but now, the agency of man, inspired, the devout mind would say, by higher wisdom, has disarmed it of nearly all its ancient terrors. Yellow fever, but a few years since, was regarded as one of the most dangerous of contagious diseases, and as a native of the warmer latitudes of our national domain; but now, it is known to be an exotic, non-contagious, and the experience of the past four years has shown that it can be positively excluded from our shores by quarantine and hygienic regulations. Thus we are not permitted to fold our hands in helpless idleness. The experience of the past and all the instincts of our nature compel us to inquire and experiment in the future. Only let that inquiry be thorough, patient, steady, regardful of the manifest laws of creation, and let the experimentation be intelligent, as far as possible in accordance with the operation of those laws, not spasmodic, blind, and ignorantly empirical.

We should fail to do justice to Dr. Cotting's discourse did we omit to call attention to the copious notes which follow it. As we have said, they contain the principal facts upon which his argument depends. We cannot too strongly urge upon his readers to give them the most careful examination, for they are indispensable to a proper appreciation of his reasoning and deductions. They are of great weight, and are gathered from a wide range of professional and general reading. That the author himself has some of the moral courage which he so strongly inculcates on his hearers, is evident from the facts which he gives in one of them, drawn from his own experience :—

"'Dr. Hawrowitz, Physician to Prince Constantine, told me,' said Dr. Roeser, Physician to the late King Otho, to the writer, 'that the mortality in the hospital of the old Russians at Moskowa—who consider by their faith disease as a punishment by God, and the application of medicines for that reason a sin—is not greater, if not less, than in other hospitals. They apply only cleanliness and good nourishment.'—*MS. Notes of a Visit to Athens, Greece*, 1860.

"The result thus stated agrees with our own experience. In the epidemics of 1847–8, we took care of over three hundred cases of typhus fever without administering drugs. The cases were taken indiscriminately, including those in a dying state when first seen. The result was thirty-one deaths in three hundred and seven cases. In an epidemic of scarlet fever in 1848–9, out of eighty-one cases so cared for, seventy-seven recovered. With every attention to the comfort of the sick and as thorough nursing as possible, the progress of the disease was as tolerable, its continuance as short as, and dangerous sequelæ less frequent than in other cases more 'actively treated.' In 1849, of forty cases of measles, thirty-nine recovered. The writer sometimes takes care of the more painful diseases, rheumatism for instance, without drugs. It requires greater patience and painstaking on the part of the practitioner, but the result is satisfactory. 'I had not time,' said a prominent physician the other day in the writer's hearing, 'to persuade the family that the patient did not need any medicine, so I wrote a prescription and departed.'"

And thus we take leave of this able and interesting discourse; only remarking that it ought to be regarded merely as a sketch in outline, which, from its very meagreness, will be apt in some quarters to fail

of just appreciation and to be undeservedly condemned in others. The subject he has touched, if properly elaborated, might be profitably expanded to an extended treatise; a further development which we sincerely hope the author may find the time to give to the world hereafter.

Death of Prof. Timothy Childs.—We are pained to announce the death of this well-known and highly-esteemed member of our profession, at Norwich, Conn., on the 3d inst., from the effects of an excessive dose of morphine, administered by himself. Dr. Childs was a native of Pittsfield, in this State, and filled for many years an honorable place as Professor of Anatomy and Surgery in the Berkshire Medical College, and more recently as Professor of Anatomy in New York Med. College. He also served with distinction as assistant surgeon to a Massachusetts regiment in the Mexican war, and on numerous occasions acted as a volunteer after the great engagements of the recent war. He was endeared to a large circle of friends by his kindness of heart and genial disposition, and his death will be widely mourned. It is thought he was laboring under temporary insanity at the time of his death.

We learn that Dr. Horatio R. Storer, of this city, has been appointed Professor of Obstetrics in the Berkshire Medical College.

Dr. Newman stated, at a recent meeting of the New York Academy of Medicine, that within his knowledge vaccine matter from a cow had produced smallpox in the person vaccinated. He thought such cases were not rare during the recent epidemic.

The books of the Federal undertaker at Nashville, Tenn., show that he has buried, since the Federal occupation of the city, 13,631 soldiers and government employees (1000 of the latter); also 8,000 rebel soldiers, and 10,000 contrabands and refugees.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, September 16th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	48	46	94
Ave. mortality of corresponding weeks for ten years, 1853—1863,	44.5	47.3	91.8
Average corrected to increased population - - - - -	00	00	100.21
Death of persons above 90 - - - - - - - - -	0		

Communications Received.—Extracts from the Records of the Providence Medical Association.

Pamphlets Received.—Tenth Annual Report of the Births, Marriages and Deaths in the city of Providence, R. I., for the year 1864. By Edwin M. Snow, M.D., Superintendent of Health and City Registrar. Second Edition.

Deaths in Boston for the week ending Saturday noon, September 16th, 94. Males, 48—Females 46. Anæmia, 1—apoplexy, 3—disease of the bowels, 1—inflammation of the bowels, 4—congestion of the brain, 1—disease of the brain, 3—inflammation of the brain, 1—burned, 1—cancer, 1—cancrum oris, 1—cholera infantum, 11—consumption, 10—convulsions, 3—croup, 1—cyanosis, 2—debility, 1—diarrhœa, 10—dropsy, 2—dropsy of the brain, 3—drowned, 1—dysentery, 1—miliary fever, 1—scarlet fever, 1—typhoid fever, 2—typhus fever, 1—hip disease, 1—disease of the liver, 2—congestion of the lungs, 1—inflammation of the lungs, 3—marasmus, 5—old age, 1—peritonitis, 1—premature birth, 1—sore throat, 1 teething, 3—unknown, 6—whooping cough, 2.

Under 5 years of age, 52—between 5 and 20 years, 11—between 20 and 40 years, 10—between 40 and 60 years, 12—above 60 years, 9. Born in the United States, 72—Ireland, 13—other places, 9.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. LXXIII. THURSDAY, SEPTEMBER 28, 1865. No. 9.

REPORT UPON THE EPIDEMIC OCCURRING AT "MAPLEWOOD YOUNG LADIES' INSTITUTE," PITTSFIELD, MASS., IN JULY AND AUGUST, 1864.

BY DRS. A. B. PALMER, C. L. FORD AND PLINY EARLE.

[Concluded from page 163]

UNFORTUNATELY, we have too many experiences in our own country, confirmatory of the conclusions to which the foregoing facts so strongly tend. The National Hotel disease, which occurred at Washington, at the time of Mr. Buchanan's inauguration as President, in 1857, is fresh in the memory of many. A large number of guests of that popular hotel were seized, almost simultaneously, with a disease in some respects peculiar, but essentially an intestinal or enteric fever. Poison was suspected, but a rigorous investigation brought the committee appointed for the purpose, and all the medical attendants upon cases, to the belief that the disease was due to sewer gases. The drain of the privy was found to be obstructed; and the foul emanations were driven back, poisoning many who inhaled them. On removing the obstructions, the effluvia and the cause of the disease disappeared.

In such emanations, the gases most familiar to chemists and most offensive to the senses, are sulphuretted and carburetted hydrogen; but, mingled with these, and sometimes independent of them, are various other substances less defined and appreciable—matters in the process of fermentation and decay, and probably containing living germs of low organization. These obscured elements, substances perhaps destitute of odor, enter the system sometimes unperceived, mingle with the blood, and, by their presence there, induce changes in the fluids and make impressions upon the solids which create the phenomena of disease. These subtle elements may be produced without the more perceptible and offensive gases; and hence the absence of odors may not prove the absence of poisonous emanations. Still, offensive odors are usually present.

Not only are these poisonous elements taken into the system in the air respired, but they are quite as effectual when taken into the

stomach, mingled with ingested water. The cases are numerous where water, contaminated with fæcal and drainage matter, has been the cause of typhoid fever and allied diseases. The following are some of them:—

Richmond Terrace, Clifton, is a crescent composed of thirty-four houses. In 1847, the inhabitants of thirteen of these houses drew their drinking water from a well at the end of the crescent. The remaining houses were supplied with water from another source. At the end of September the water of the well gave evidence to the taste and smell of being tainted with sewerage. Early in October typhoid fever broke out, nearly at once, in all the thirteen houses in which the tainted water had been drunk, but did not make its appearance in any of the other houses. In almost every one of the thirteen houses two or three persons were ill, and in some a much larger number. The houses in which the fever broke out were far apart in the terrace, and there was little or no intercourse between their inmates—the water from the well being the sole connecting link.

The following is a case even more conclusive, if possible, than the foregoing, in demonstrating the production of typhoid fever from foul matters—from a defective drain soaking through a porous soil into a well, and thus contaminating the drinking water. This case occurred in Williamstown, Mass.; and as the facts have never been presented in the literature of the profession, a somewhat detailed statement will be given. Besides having had oral accounts from various entirely reliable sources, the committee have received full and separate written statements from three parties: one, a very intelligent physician who attended many of the cases; and the other two, sufferers from the disease—one now an advanced student of medicine, and the other of law. One of the committee has also visited the place and examined the premises concerned.

From the statements it appears that, about the middle of June, 1860, typhoid fever broke out in a boarding house. The whole number sitting at the table was from thirty to thirty-five persons—mostly students of Williams' College. In the course of two weeks the greater portion of these boarders were affected—twenty or more of the students falling sick.

Dr. S. Duncan, one of the physicians who attended the cases and made the investigation, says, in his communication:—

"On the 18th of June, 1860, I was called to visit, professionally, one of the boarders, and found him suffering with the initiatory symptoms of typhoid fever. At this time there was, to my knowledge, but one case of fever in town. The patient was removed from his lodgings in the College to this boarding house, for the sake of greater convenience in care and treatment, and continued to use the water from the well on the premises for at least ten days from the first visit.

"This patient was under treatment for about six weeks; and though having, at times, unfavorable symptoms, he at length recovered. About the last of June the cases began to multiply rapidly among the boarders; and, as the disease had not made its appearance in the town, the conviction was forced upon my own mind that its origin was local, and that a solution of the problem might be found by an examination of the premises. The building, cooking apparatus, and, in fact, the whole house, was minutely inspected, without discovering any cause for the sudden development of the disease; but out of doors was found what was thought, at the time, to be a satisfactory explanation of the phenomena.

"A drain, which received all the refuse of the house, was found to be choked near its exit into another drain, which conveyed surface water from a highly cultivated field, and which also ran near the well. The season was uncommonly wet, and the earth in the immediate neighborhood of the well was so completely saturated with organic matter that it oozed through the ground and stood in pools of putrescence on the surface. Nearly two thirds of the inmates sickened; and though the cases differed in severity and duration, yet all presented the unmistakable phenomena of typhoid fever. There were no deaths! Among the boarders were a number who did not drink the water *at dinner*, and of these it was remarked that not one sickened! The family of one of the professors of the College, living in an adjoining house and using water from this well, sickened like the others; the professor, who drank no water at dinner, alone escaped. I am tolerably familiar with typhoid fever, and have never had a doubt that the disease appearing at that house, and which was associated with drinking that water, was typhoid fever. All that drank the water unboiled had the disease; all who avoided it in this state, escaped. It appeared that the action of heat rendered the water innocuous, either by volatilizing, coagulating, or otherwise changing the organic matter."

Though several of the students, after becoming ill, went to their homes and suffered their sickness, no case is mentioned of the disease having spread from them to others.

One of the other gentlemen, in his communication, says:—

"We thought the illness was from the water—

"(1) Because of the drain so emptying that the foul water ran directly into the well from which we drank.

"(2) Because, of some thirty or thirty-five boarders, all at the same table, those who drank tea and coffee, exclusively, three times a day (and there were several such), escaped all symptoms; as well as those who took ale for dinner, and tea and coffee at the morning and the evening meal.

"(3) It could not have arisen from impure air, study, or epidemic influence, as none in the town were affected save parties who used the water; and many who were sick were among the *laziest* of students.

"(4) Those were the subjects of the severest sickness who were, exclusively, drinkers of water. One of the sick, who never used any other drink, was confined eight weeks, and was unable to fill his appointment on commencement day.

"Another, who drank water moderately, and only at dinner, had the disease in a much milder form, and was confined a very much shorter time."

This gentleman, the writer of the account, was seized on the 25th of June, and he says:—

"At, or within a day or two previous to and after, my illness, several of the boarders were seized with similar symptoms and sent home."

From these dates it appears that the cases continued to occur from near the time of the attack of the first, until all were affected. Some resisted the influence of the water longer than others, but all were taken within a period of ten days. The water, when carefully noticed, was found to taste and smell of the sewerage; though when served upon the table with ice, these qualities were not perceived.

Although this poison is sometimes conveyed to the system through the medium of drinking-waters, yet in most cases it is taken through the air. Says Dr. Murchison:—"Many instances might be cited where, although the water supply was the same to all, only those persons exposed to sewer emanations have been attacked."

The intimate connection between typhoid fever and night-soil, sewer-emanations, or contaminated drinking-waters, is now so generally recognized by the more enlightened members of the profession, that, so far as they are concerned, some even of these citations might have been omitted; but so much ignorance prevails in the community at large on this subject, that these references to facts and authorities are deemed necessary for the purposes of this report.

Nothing can be more important to the hygienic interests of the community than that it should be distinctly understood that the connection between the causes referred to and the effect—between these forms of filth and fever—is so close and constant, and these causes are so much under control, that, as has been remarked by several recent French writers, "these fevers can, so to speak, be produced or prevented at will."

It is not alleged that the peculiar poison which produces typhoid fever is generated in every form of animal matter undergoing decomposition, or that it is present in every putrid odor.

It is probable that the special poison is produced only under somewhat peculiar circumstances, or when a particular kind of fermentation takes place in these foul matters; and unless the amount of fermenting material is very abundant, and the change rapid, the poisonous matter is carried off in the air as fast as formed, and is farther changed, oxidized and destroyed. Especially is this the case where free ventilation is allowed. But nothing which is the subject

of inferential proof seems more certain than that, not unfrequently, such poisons are produced; and when abundant, or pent up, and then conveyed to human lungs or into human stomachs, operating either as essential or predisposing causes, effects such as have been described are produced—typhoid fevers are engendered. No one doubts the existence of a peculiar poison producing agues, or the conditions usually producing such poison; yet it is appreciable by none of the senses, and has been detected by no chemical tests. The proof of its existence is inferential, from the conditions and effects observed; and a knowledge of the existence of a typhoid poison and the conditions of its existence, are arrived at in the same way.

These views of the origin of typhoid fever have been objected to on the ground that, if true, the inhabitants of most European continental cities, and particularly those of Paris, would be continually laboring under an epidemic of the disease, as their *cabinets d'aisance* are so frequently filthy and offensive. It may be proper to repeat, and must be borne in mind, that it is not claimed that all filth of this kind is capable of inducing the disease, but that certain conditions of fæcal and sewerage fermentations have such capability. It should be farther understood that all persons are not equally susceptible to the influence of any poison, and there are various zymotic poisons to the influence of which many persons are not susceptible at all. However exposed, a large portion of the human family are never affected by the poison of scarlet fever; and there are others upon whom the yellow-fever poison, and marsh malaria, will produce little or no effect. There are different degrees of original susceptibility to typhoid poison—age and other less appreciable conditions exerting a decided influence.

Again, poisons slowly introduced and habitually present in the system, often fail to produce their ordinary effects. This fact is the basis of *acclimation*—of becoming accustomed to a malarious or otherwise injurious climate so as to escape its diseases. It is a well-established principle in etiology, that recent residents are much more subject to endemic diseases than the older inhabitants. The Negro race, from being exposed all their lives, and through a series of generations, to the malaria of African jungles or Southern rice-fields, resist influences which would cause those not thus acclimated to speedily succumb. On the same principle, many Germans endure an amount of beer and tobacco that would be destructive to those not having their long training to these indulgences—a training in their own persons and in their ancestors. All are familiar with the tolerance established by habit in the use of opium, arsenic, &c. The principle would admit of indefinite illustration. The Parisians have been accustomed, to a certain extent, to these odors and influences all their lives and through a series of generations. They may have become to this extent acclimated to such an atmosphere. Such is

not the case with all—with but few in this country of broad spaces and more cleanly habits. Such, we will venture to say, was not the case with the young ladies attending the Maplewood Institute. Hence their greater susceptibility.

But, notwithstanding this principle of acclimation, typhoid fever is the prevailing fever of Paris and a large portion of the Continent, while it is much less frequent in England, where this kind of cleanliness is more regarded. In Great Britain, where crowding and deficient ventilation, bodily filth and starvation are more prevalent, *typhus*, not typhoid fever abounds.

In view of the state of things at Maplewood, and of these facts and admitted principles of science, what shall we conclude was the cause of the *Maplewood fever*?

Those who have followed the current of the preceding statements, will be ready to anticipate the conclusion to which the committee have been brought.

They are of the opinion that the disease at Maplewood essentially originated in the state of the privies and drainage of the place; the high temperature and other peculiar atmospheric conditions developing, in the organic materials thus exposed, a peculiar poison, which accumulated in sufficient quantity to pervade the whole premises, and operated a sufficient length of time to produce disease in young and susceptible persons, rendered more than usually impressible, probably, by the protracted heat of the summer and the severity of their labor, and, possibly, by other influences belonging to the season and to their peculiar conditions.

The reason of this opinion will, perhaps, appear more plainly by a review and more minute statement of the facts in the case, and a comparison of these with the other facts and with the etiological principles already adduced.

The morbid influence pervaded every part of the premises where the pupils roomed, but did not manifest itself quite equally in all. It showed rather more of its effects nearest the chief sources of the effluvia.

The following table shows the number of pupils rooming on each floor of each building; the number sick on each floor, just before, at the time, or soon after the close of the school; the number sick with *fever* at the same time; the number of deaths in the building and the number dying away; the percentage of sickness; the percentage having fever and the percentage of deaths of the cases of fever.

From this tabular statement, which may be seen at a glance, but which is worthy of careful study, and which the committee have been able to make only after most extensive inquiries, continued for some months and involving a correspondence with about a hundred persons, it will be seen that the percentage of the number of cases of sickness in the east building is greater than that of those in the

west; the percentage of fever, however, was greater in the west building, and the percentage of mortality much greater there. By referring to the diagram of the grounds, it will be seen that the west building was more exposed to fæcal effluvia, by the closer proximity of one of the privies, and by the hall being directly connected with it by a covered passage; and the testimony of the pupils and their friends shows rather more complaint of the odors in the west building than in the east. On the other hand, the east building was much nearer the site of the old barn and the offensive pool near the opening of the kitchen drain; and the privy on the east side of the chapel, though not communicating directly with the hall, yet indirectly, through the corridor, was represented as being, a part of the time, in a peculiarly bad state. This is the one which was cleaned out one night, producing the odor said to be so intense. The classes reciting in the "Cabinet," a room on the first floor of the chapel building, near the privy, are reported as being often much annoyed by the odor, especially when the windows were open.

Rooming in East Building.	No. of Occupants.	No. of Sick.	No. sick with Fever.	No. of Deaths.	Deaths in Buildings.	Deaths out of Buildings.	Per cent. of Sickness.	Per cent. of Fever.	Per cent. of Deaths by Fever.
Second Floor - - - -	20	17	12	1	1		85.00	60.00	8.33
Third Floor - - - -	21	21	16	4		4	100.00	76.19	25.00
Total - - - - - -	41	38	28	5	1	4	92.68	68.29	17.85
West Building.									
First Floor - - - -	10	9	9	4	1	3	90.00	90.00	44.44
Second Floor - - - -	11	10	7	1	1		90.00	63.63	14.28
Third Floor - - - -	12	9	7	3		3	75.00	58.33	42.85
Total - - - - - -	33	28	23	8	2	6	84.84	69.66	34.78
Total of both Buildings	74	66	51	13	3	10	89.18	68.97	25.49

But, as before stated, the whole premises seemed involved in an atmosphere impregnated with morbid materials and influences. Indeed, a fact which has not yet been alluded to, but which must be stated, in order to give a complete view of the case, seemed to indicate that the morbid influence was not entirely confined to the grounds of Maplewood. In a well-appointed dwelling, directly west of the premises, on the opposite side of the public street, two cases of typhoid fever occurred, and several other members of the family suffered from other forms of ill health, accompanied by decided derangement of the stomach and bowels; and one of the members of a family in an adjoining house was reported to have suffered from some similar form of disease. These houses were the nearest of any to the buildings of Maplewoood. In the other direction

there were no dwellings for a considerable distance. Besides, the winds during July tended to carry effluvia westward. No record of winds was kept at Pittsfield, so far as the committee could ascertain; but in one of the communications from the physicians, it was stated as the impression of the writer that easterly winds prevailed during this period; and from a record kept at Williams' College, some twenty miles north, we find that: "In July the wind was east, or northeast, on the 2d, 7th, 10th, 14th, 16th, 17th, 18th, and 25th; but from the 14th to the 18th there was scarcely any wind. The succeeding week was smoky."

Absence of winds was, doubtless, the worst condition for the inmates of Maplewood. Strong winds would have tended to carry away and dissipate the vitiated atmosphere.

As to the amount of influence which the different degrees of crowding exerted in predisposing to attack, the facts are not sufficiently numerous to determine. The following, however, may be taken for what they are worth.

In the west building three lady teachers roomed—one on each floor. On the first and second floors they roomed alone and remained well. The one on the third floor roomed with a pupil, her sister, and both died after returning to their home. The southeast corner-room of the west building—first floor—was occupied by three pupils. One died, and both the others had the fever severely. In the east building three teachers roomed, all in separate apartments. Of the two who were on the second floor, one had very severe typhoid fever and the other was not sick. The one on the third floor escaped the fever. Most of the rooms in both buildings were occupied, each by two pupils; and generally there was little difference in the crowding or the ventilation.

The circular sent to the physicians of Pittsfield, a copy of which was given in the early part of the report, was responded to by seven—replies not having been received from two or three. Six of the seven very nearly coincide in their views as to the nature and cause of the disease. They regard it as a continued fever of a somewhat peculiar variety, but of a typhoid type; and express the opinion that the chief causes were local in their character, mentioning, as the most efficient, the condition of the privies and the drains, as already described, and the removal of the old barn and pig-sty, thereby exposing to the extreme heat a soil abounding in organic matter, much of which had before been covered. Deficient ventilation, deficient sunlight (by one), and rumored uncleanliness and want of ventilation of the cellars were mentioned by two, as probable accessory causes. The propagation of the disease by the earlier cases, occurring in an atmosphere containing so much decomposing material, was also spoken of by two, as aiding in accounting for its great amount. Some of these letters contain specifications in regard to the hygienic conditions of the place, and refer to various items of testimony as

to odors, &c.; all of which, taken with many other statements, has had its weight in determining our opinions respecting the cause of the disease.

One of the replies takes a somewhat different view from the rest as to certain features of the disease which occurred at Maplewood, and as to the more efficient causes producing it. Although this communication stands alone in some of its positions, yet the high source from which it emanates, and the plausible views which it presents, give it a right to careful and respectful attention. From its taking positions not quite in harmony with the rest, or with the conclusions to which the committee have arrived, they feel called upon to present and consider its statements more at length.

The writer expresses the opinion that the disease at Maplewood was largely, if not chiefly, due, in its origin, to a general wide-spread malarial influence engendered by the heat and drought of the season, lowering the streams and ponds, and exposing surfaces to the sun usually covered by water; and he dwells with much emphasis upon the fact that about the time of the commencement of the disease at the Institute, there were various other attacks in the community of a severe character, febrile and intestinal, some cases of cholera morbus proving speedily fatal; and it is also stated that many of the cases, not only in Pittsfield, but in neighboring towns, furnished evidence of a malarial character by yielding readily (and as it was thought they otherwise would not have done) to free doses of mercury and other cathartics, followed *early* by large anti-malarial doses of quinia. From these and other considerations he concludes that the disease at Maplewood was "typho-malarial fever," and the result of a combination of causes rather than of any foul conditions of the surroundings of the institution.

That a general influence arising from the causes referred to actually existed, the committee have no doubt, but as totally irreconcilable with the conclusion that the disease at Maplewood was caused by such general influence is the fact, that in Pittsfield and its vicinity, outside of the institution, typhoid fever did not prevail, or any disease having the specific characteristics of the terrible scourge occurring there. The testimony on this point already given is conclusive. The exemption of the community cannot have been due to any particular treatment, as they had every variety, from heroic to infinitesimal doses: certainly it could not have been due to large doses of quinia, as but a small proportion of the people or of those attacked with any form of disease took such doses. Nearer the lowered streams and dried marshes than Maplewood, were several large manufacturing establishments, with boarding houses for operatives, where the crowding must have been at least as great, and other personal conditions certainly no better than at the Institute; but in none of these did such a disease prevail. It is presumed their local surroundings were different. These considerations were not ig-

nored by the author of the letter under consideration, for he says: "of the existence of local causes at Maplewood no one can doubt." He, however, adds:—

"There are very few public or private dwellings in and around which the hygienic conditions are perfect, and in such a season any such cause is intensified to its maximum; but that there was any *extraordinary* local cause, in this instance, I have never been able to satisfy myself. These girls, many of them feeble and nervous, all of them worn down by excessive labor in preparation for the anniversary exercises, these labors constantly increasing in severity as the end of the term approached; appetite and sleep failing them, and panic-stricken as they were at the occurrence of so much sickness, and at the deaths, were certainly fit subjects for fever-poison to operate upon in its worst forms.

"The rooms are very small, all opening into a common, narrow hall, with no opportunity for ventilation, except through the one window of the room and the door into the hall, and the latter having no direct ventilation. With the extreme heat and remarkable absence of winds at the time, it was *impossible* to secure anything like thorough ventilation, and to avoid the constant impregnation of the air with the breaths and exhalations of the fever patients, and especially those from the abundant and very offensive alvine discharges. In this air these girls lived, day and night, and my opinion is, that a large majority of the cases occurring after the close of the school were the result of *contagion*, or *infection*, from the first cases, rather than from any extraordinary cause of a different nature."

This brings clearly into view the question of contagion, which must be judged of in the light of the facts and the citations of professional opinions already given in a former part of the report, and by the peculiar circumstances of the case in hand.

The first attacks occurred during the last days of July, and the deaths in the buildings, from the 2d to the 10th of August. There was, then, time for the communication of the poison from these to the rest.

The labor of preparing for the approaching anniversary exercises, though undoubtedly exhausting, was only a repetition of that of previous years, when the ordinary health prevailed, and of itself cannot be considered responsible for the production of such a prevailing and specific disease.

The statements respecting want of ventilation, excessive labor, &c., though somewhat stronger than the committee, from their information, would have felt justified in making, are yet, it is to be feared, too near the truth; and if ventilation was as deficient as represented, it must have contributed fearfully to the retention and concentration of any poison, whether arising from the bodies of patients or generated in other sources.

Especially would this circumstance have given concentration to a

poison originating in the privies and conveyed to the narrow halls and the dormitories, through the covered corridors connecting these places, as well as to that received through the windows from the outer air.

The servant girl, the first patient who died of fever, spent the first few days of her sickness in a room on the ground floor of the gymnasium, and was then removed to the detached building marked "Cottage" in the diagram. Her evacuations were thrown into the privy east of the chapel. One pupil who died, and the teacher who recovered, were sick in the east building, and their excreta were deposited in the same place.

The other two pupils who sickened and died in the Institute, were in the west building, and their discharges were disposed of in the privy of the west building. None of the discharges, except in the case of the pupil who died in the east building, were in any way disinfected. In each case they were removed from the room soon after being evacuated, except when this occurred late at night, when, in some cases, they were kept covered in the room until morning.

As the inmates were all more or less within the possible influence of these excreta, all resorting to one or the other of the privies, there was opportunity for receiving the contagion from this source, if it was capable of conveying it.

All within the two buildings were likewise within the possible influence of exhalations from the breath and the surface of the sick. So much can be said for contagion as a cause, in the later cases.

But it is not claimed that the early cases were produced by contagion; and as all were in a similar state, subjected to the same conditions and breathing the same tainted atmosphere with the first, why might they not have been affected by the further persistence of the same cause? Is it not more likely that they were? In several of the cases cited from the authorities, the attacks of large numbers were so simultaneous as to exclude the possibility of contagion from one to another; and in other cases, as in Richmond Terrace, other circumstances forbid the belief in the agency of contagion. Does not the case at Maplewood strikingly resemble those cited, where contagion could not be considered as playing a prominent part? If the family on the opposite side of the street were affected by the influences at Maplewood, was that more likely to be from emanations from the persons, or from a poison abundantly produced on the grounds? Two patients from Maplewood were sick with fever in a house where there were several persons of susceptible ages, and though no special precautions were taken, the disease was not communicated. Two sisters, day-scholars at Maplewood, took the disease and were ill at the same time, in the same house, with other members of the family of a susceptible age; but no others took the disease. Of nearly fifty who took the disease at Maplewood, and suffered from it long and severely in the families of their homes, the

disease could not, in a single instance, be regarded as having communicated its poison to others. Not a case of similar sickness occurred in the neighborhood, excepting in a single instance. One young girl, a sister of a Maplewood pupil who had the fever, suffered, not long after, from typhoid fever; but one such instance occurring among the hundreds that must have been exposed, must be regarded as only casual. Two mothers of young ladies who died at the Institute, one from Rochester, N. Y., the other from Vermont, came to Maplewood to be with their daughters, each remaining about one week. Both of these ladies had the fever severely soon after they returned home.

All these facts certainly point towards the local origin of the disease, independent of contagion. Still the possibility of contagion is not denied. Especially is it not denied that the fæcal evacuations from the fever patients, mingled with other large fæcal accumulations, may have contributed to the production of a poison more virulent than that existing before; but all experience shows that, admitting a contagious poison, a polluted atmosphere, the presence of decomposing matter is necessary to give that poison wide-spread effects.

It has been urged as an argument against a local cause, but not from any professional source, that a similar condition of privies and drains had existed at Maplewood for years, while no severe sickness had occurred. Although these conditions may have been similar, they were not identical. Time had certainly allowed of further accumulations, and had effected changes. It is the "last straw that breaks the camel's back;" and besides, there had not been, before, the intense heat and drought of the past summer. This argument, as well as many others, suggested by a laudable sympathy for the Principal of the Institution, may and does diminish the weight of his responsibility, but does not impair the scientific conclusions as to the cause of the disease. The argument in favor of a special local cause seems conclusive, unless the existence of the local impurities described be disproved. This the committee deem impossible; for no amount of negative testimony can overbalance the positive evidence of such a cloud of witnesses as have testified in the case.

Though fully admitting that few public or private dwellings are, in their internal arrangements or outward surroundings, in a perfect hygienic condition (and hence so many cases of comparatively isolated zymotic diseases everywhere), still, the committee cannot but think that the condition of the drains and their openings, as described, and particularly of the two privies (used by a family of more than 110 persons), consisting of superficial vaults without any kind of drains, and filled to overflowing in extremely hot and dry weather, and withal so near, and so intimately connected with the recitation and study-rooms, and the badly ventilated dormitories of so many girls, is something *extraordinary*, and, certainly, *local*.

In the communication above mentioned, much stress is laid upon

the general causes of the disease having pervaded the whole region; that is, the heat and drought, which reduced ponds and streams, and generated a general malarious influence, producing at Maplewood a typho-malarial fever.

Without in the least denying such an influence, it is sufficient for the due appreciation of its effects in producing the sickness at Maplewood, to re-state the fact (and repetitions on so important a point seem justifiable) that, though for a few days it produced other forms of severe disease, it did not cause a prevalence of typhoid fever in other localities in the neighborhood. The testimony is uniform, that typhoid fever prevailed in Pittsfield, outside of the influence of the Institute, to a less extent—certainly not to a greater extent—than usual at the same season of the year. We must, therefore, conclude, that, though a general influence may have contributed to the production of disease at Maplewood, as elsewhere, yet, that that general influence was modified in its effects by local causes, and those not of an ordinary character, to have produced such results.

Whatever theoretical view of the subject be taken, the conclusion is the same—that the local sanitary conditions of the place must be, mainly, held responsible for this painful calamity.

In prosecuting this investigation, the committee have had but one object, and that was, to ascertain the exact truth, both as regards the character and amount of disease which occurred, and the causes which produced it. To this end sufficient time has been taken to exhaust every source of information, and also to allow of the abatement of the force of first impressions and the subsidence of feelings necessarily excited by the reception of so many communications abounding in the strong expressions of wounded paternal affection, or in the agonized outbursts from the lacerated hearts of mothers who, like Rachel, were mourning for their children, and would not be comforted.

They have endeavored to give due heed and the proper weight to every fact and suggestion bearing upon the subject; and have striven to pursue, impartially, every plausible train of thought, to whatever conclusion it tended. They have endeavored, in this report, to meet frankly every suggestion opposed to their opinions, and to deal fairly with every view.

In performing their task, the committee have been engaged with hygienic conditions and events. With persons, and motives, and responsibilities, they have nothing to do.

It may be said, however, that, of course, the subject was not understood and regarded by those responsible for the condition of the place, before the sad results had occurred, as the committee now understand and regard it, otherwise, upon every principle of self-interest and the most ordinary sentiments of humanity, precautionary measures would have been taken.

It is alleged, and, without doubt, truthfully, that various improve-

ments which have since been made on the premises, were in contemplation for some time previous to the sickness, and were delayed chiefly in consequence of an expected change in the proprietorship—that previous experience of a similar condition of things had suggested no danger—that even after the disease commenced, medical advisors did not at first recognize any local causes—and that, above all, no such season as the last had before occurred; and further, that the contemplated changes could not well have been effected when the school was in session. All this and more could undoubtedly be truly said in defending whoever was responsible for the condition of the premises from the suspicion of intentional wrong, or reprehensible indifference and neglect; but this is not our task. These considerations did not alter results; and in view of such results, it cannot be too much regretted that the contemplated improvements were so long delayed.

To whatever extent the ignorance of sanitary laws may shield the violator from moral responsibility, it will not abate the physical penalty of such violation. This will fall with the same force upon the unconscious, the ignorant, the helpless and the morally innocent, as upon the intelligent, the powerful and the wicked. It is too much the custom to attribute all cases of sickness and death, however palpably the result of violated laws, to a special mysterious Providence, or to the decrees of fate—forgetting that without a miracle all natural events are the results of natural causes; and that over such causes men have often control. Though there is a Providence over all, it should be remembered that, in the world of nature, that Providence operates in accordance with, and by the means of established laws. Though the hairs of our head are all numbered, and not a sparrow falls to the ground without our Father's notice, yet the number of our hairs is determined by the fixed principles of our organization, and every sparrow which falls to the ground does so in accordance with laws established at the dawn of creation.

To prevent the poison of typhoid fever, when taken into the system, from producing its legitimate effects, except by natural agencies, would require as positive a miracle as to restore a severed head, or arrest the course of the heavenly bodies in their spheres. Instead of closing our eyes and soothing our minds by casting the responsibility of a great calamity upon Providence, we should look to the physical conditions producing it, and see whether those conditions are removable; or whether the consequences, by human foresight and agency, could have been prevented. Until this is done more generally and more effectually than heretofore, such calamities will continue to occur.

The case of Maplewood is not the first in the history of similar institutions in this country, and it is feared it may not be the last. The committee have information of others, though they have not authentic knowledge of sufficient details to make them available in

a report intended to be full and exact in its facts and rigid in its deductions. The chief object of this report is, by an exhibition of the truth, to prevent similar calamities in the future. In this view and with this object, all personal and local considerations sink into insignificance, and must not be allowed, as they have not been, to obscure the truth.

Knowing the great interest which this matter had excited, and anticipating the attention which might be given to the facts and principles developed, and their possible influence upon the preservation of health and life in other cases, the great responsibility of this undertaking has been appreciated.

The importance of the subject has been deemed sufficient to justify so extended a report; and the conclusions to which the committee have come, together with the data upon which they are based, are submitted to the judgment of an enlightened profession and a discerning public.

The lesson for all, for the future, is too obvious to need further pointing out; and the committee cannot doubt that they would hazard little in predicting that the wisdom obtained by this sad experience will be of value in the future management of this institution, and secure precautions which will forever prevent the recurrence of such a calamity.

If the lesson shall be heeded by other institutions, and, to any extent, by the people at large, those who have been engaged in thus presenting it will be more than compensated for their labor.

Signed, A. B. Palmer, M.D.
C. L. Ford, M.D.
Pliny Earle, M.D.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, SEPTEMBER 28, 1865.

The Cholera.—The current year will be long remembered for the number of destructive epidemics which have prevailed in it. Its beginning was marked by that outbreak of typhus or cerebro-spinal meningitis, which, ravaging Russia, threatened at one time to extend its devastating course over Europe, and startled both the old world and new for a while from their fancied security and neglect of sanitary laws. Fortunately, it ceased as suddenly as it began, and in the face of other dangers before us is already almost forgotten. Later an allied affection, also a form of typhus, broke out among the horned cattle of Northern Germany, and, crossing the sea, is still at its destructive work among the herds of England. Thousands of beasts have been lost, and the axe is the only remedy found to stay its course. At the same time a fatal disease resembling scarlatina has been carry-

ing off the swine in Ireland, so that Great Britain, always scantily supplied with meat, seems in danger of a serious famine.

But more terrible than these, the cholera, awakened from its ten years' sleep in Egypt and filled with the malignancy engendered by so long a repose in that land of filth and pestilence, has started on a course which threatens to be as devastating and widespread as any in its dreadful history. In the early summer we heard of its ravages among the multitudes of pilgrims at Mecca, where the deaths were counted by many thousands, but so often has it laid those regions waste without extending farther, and so favorable are the conditions for its existence in that annual assemblage of Mussulmen, that no fears of its undertaking one of its grand marches were at first entertained. Soon, however, the news came that it had reached Alexandria and Cairo, in which cities it carried off more than 9000 souls between June 12th and July 23d. Gradually dying out there, it has at last leaped the Mediterranean, and invaded the European cities along its whole northern shore. The accounts which have reached us of its frightful doings at Constantinople, and the description by eye-witnesses of the panic which exists there, rival those in the pages of Boccaccio and Manzoni.

The latest European mail brings the following intelligence of its progress :—

"The United States Consul at Constantinople, in a letter to the State Department, dated August 14th, says :—'It is estimated that the victims of cholera already number 20,000, the number of deaths in a single day having reached 1000. It is said that probably 200,000 terror-stricken inhabitants have left the city.'

"The Consul at Barcelona, under date of August 22, says :—'The cholera is fully declared in this city. The deaths from this disease have averaged up to this date about 12 per day, or the total number of deaths from cholera in Barcelona up to August 21 is 115. There have also been many deaths from other diseases, and although it is stated that over 50,000 people have left Barcelona during the last 15 days, leaving at present, perhaps, 130,000 persons in the city, on the 21st inst. there were 21 deaths.'

"The Consul at Leghorn, under date of August 25th :—'The cholera, which has prevailed in an alarming degree for the past three months in Egypt, Turkey, and some of the eastern portions of Italy, has not yet reached this place. It has not broken out on the western coast of Italy, except at Malta. Among the Mussulmen population nightly processions perambulate the streets, chanting hymns and prayers for the averting of the scourge. Among the Greek population the fright has almost resulted in famine, the bakers refusing to make bread, the butchers to kill meat and grocers to sell provisions. The panic among the masses of the people is out of all proportion to the danger. In Ancona and other places on the Adriatic where it prevails it is very fatal, and of those attacked more than half die.'"

The *Lancet* of Sept. 8th, contains the following additional particulars :—The first case occurred at Gibraltar on the 29th of July, and it still prevails there, both in the garrison and among the civil population. At Marseilles there were 29 deaths on the 1st inst., 35 on the 2d and 34 on the 3d. In Manduria, the last town in Italy invaded,

there were 80 cases on the 27th of August and 31 deaths. At Ancona, on the 30th, there were 73 new cases. At San Severo, on the 28th, there were 133 new cases and 62 deaths; and from August 30th to September 1st, 134 new cases and 62 deaths. A few cases were also reported at Bologna and at a small town within five miles of Florence. At Malta, 1599 cases had occurred and 957 deaths; and at Gozò 241 attacks and 176 deaths. Between August the 5th and 18th the number of deaths in Smyrna was 319; on the 19th the mortality was on the increase. The latest news from Jaffa reports 50 to 60 deaths daily in a population of only 7000. In Constantinople the disease appeared to be diminishing, the number of deaths from August 9th to the 23d being 3081.

It will be seen, therefore, that a very fatal form of cholera is at present prevalent in Southern Europe, working its way slowly north through Italy and westward into France. Whether it will extend over the continent and cross the ocean to us, as in former epidemics, no man can foresay, but we should be culpably blind to its past teachings if we did not take every precaution against its coming and use every means to limit its ravages as immediately as if it had already reached Canada or New Orleans, its former ways of approach.

In this connection we publish the official correspondence which has already appeared in the newspapers, and which was prompted by a despatch to our government at Washington from the minister resident at Constantinople, recommending rigid quarantine regulations.

EXECUTIVE DEPARTMENT, BOSTON, September 12, 1865.

To the People of Massachusetts.

The attention of the State Government having been called by that of the United States to certain important considerations affecting the public health, the Governor, after referring the correspondence to the Surgeon-General of Massachusetts, directs the same to be made public, together with the able and instructive report of the Surgeon-General, for the information of the people of the Commonwealth. The Governor believes that no cause for anxiety exists in regard to the disease alluded to; and he trusts that, while all undue apprehensions may be quieted, the people will, by pursuing the advice contained in the Surgeon-General's Report, guard themselves against the contingencies of the future. JOHN A. ANDREW.

By His Excellency the Governor.

OLIVER WARNER, *Secretary of the Commonwealth.*

OFFICE OF SURGEON-GENERAL, BOSTON, September 11, 1865.

SIR,—I have the honor to acknowledge the receipt of the communication of the Honorable the Secretary of State, U. S., with accompanying papers from the Acting Surgeon-General, U. S. A., transmitted to this department.

In reply, I beg respectfully to inform Your Excellency that a copy of the above has been forwarded to His Honor the Mayor of the city of Boston, and to their honors, the chief magistrates of the other cities in this State.

By the General Statutes of this Commonwealth, quarantine regulations, and other matters appertaining to the public health, are solely under the direction and control of the various municipalities of the State.

Waiving the question of the contagiousness of cholera, I respectfully remind Your Excellency that the city of Boston, through its able City Physician and eminent Board of Consultation, have given the subject of an anticipated visitation of an epidemic from foreign sources that attention which its importance demands; and I have the honor, herewith, to forward you their report.

It is believed to be the opinion of our ablest medical men, that there is no ground for immediate apprehension, as the existence of cholera in England is not as yet known to be officially announced. Should, however, this disease visit our country this fall, the hygienic influences of the season would greatly modify its character, and render it comparatively harmless.

I, however, respectfully suggest that it would be eminently proper for Your Excellency, as Chief Magistrate of the State, by proclamation or otherwise, to call the attention of the various authorities of the Commonwealth to the great importance of rigid sanitary preparation, in view of the anticipation of the approach of any malignant epidemic.

The officers of the various State institutions should cautiously inspect their condition in regard to ventilation, sewerage, and drainage —whether they are overcrowded, or are wanting in any of the appliances of health; and, by timely and judicious removals or classification, be in such hygienic preparation as will effectually control or modify any disease.

Those in charge of the localities of large manufactories where there is much refuse animal matter, and of the places where large numbers of cattle are brought together for sale or slaughter, the superintendents of factories located on rivers or small streams, should realize the necessity of rigid sanitary inspection. Local boards of health should assiduously regard the condition of all stable and privy vaults, always remembering that acute disease in a time of general epidemic is apt to assume a malignancy of form as fatal as that of recognized pestilences.

The condition of the localities where large numbers of operatives of foreign extraction are congregated, with all the appliances for the propagation and spread of disease, should also be subjects for the grave consideration of health committees; and the good people of the Commonwealth generally should be called upon to observe such rules in regard to diet, clothing, and personal health, as will enable them to meet any and all disease.

Cleanliness is next to godliness, and when to this virtue there is superadded temperance, and the confidence which springs from a stout and loyal heart, with a good conscience, the people of this Commonwealth may hopefully await any visitation which God in his providence may see fit to send. I am very respectfully,

Your Excellency's obedient servant,

WM. J. DALE, *Surgeon-General.*

To His Excellency JOHN A. ANDREW.

As the public representative of our profession in New England, we would inquire what steps have been taken in this and other cities by the municipal authorities in anticipation of such a visitation? We do not wish to create a false alarm or excite unnecessary fears, but

we are certain that the sanitary condition of this city is not by any means what it should be in view of such a contingency. The horrible and pestilential atmosphere, to which we called attention a few weeks ago, is still supplied to the inhabitants of the west end of the city, instead of respirable air, on every day that a south wind blows, and open-mouthed drains continue to pour out the sewage of acres of dwelling houses into the shallow basin west of Tremont Street. Odors which cause one to hold his breath and pause, as if another step would precipitate him into a privy, come suddenly upon one while passing through streets in nearly every quarter of the city, and the recent extensive outbreak of diarrhœa in Charles Street is painfully suggestive of the result of such an attack in the presence of a choleraic atmosphere. As to the state of the cellars in the unraised portions of the populous territory bordering upon the land of the Water Power Company, we can only say that it is beyond expression dangerous and outrageous. If such evils exist in so close proximity to the best quarters of the city, how must it be in those localities so notorious for filth and poverty? We doubt not that an investigation as thorough as that made during the cholera epidemic of 1849 would reveal a sanitary condition worse even than that described in the report of the Board of Health at that time, and the arbitrary measures which were then used are imperatively called for now, immediately.

We are pleased to learn that the subject of the cholera and the general sanitary condition of the city will be specially considered at the public meeting of the Association for Social Science to be held at the State House on the 4th of October, and we trust that such measures may be taken at that time as the public safety demands.

Discussions upon Aphasia.—The love which our French medical academician friends have for learned and eloquent and deep discussions of what we may call impossible questions, has been well exemplified in the late long debates on aphasia, in the Academy of Medicine. Bouillaud, Trousseau, Parchappe, Baillarger, Cérise, Bonnafont, and other speakers, have recorded their eloquence on this topic before an admiring and applauding audience. But what is the result? To us who sit outside, and hear not the charming facility of speech, and correctness and closeness in arguing, of those who so often are there heard, it almost seems as if the *jeu ne valoit pas la chandelle.* The very disease aphasia is to most of us a new one; and we venture to say that even yet no one can give a satisfactory definition of Trousseau's new term. The whole discussion shows that it is impossible to admit the existence of aphasia, pure and simple, apart from other disturbance of the intelligence or motion; and that it is much more reasonable to regard the loss, partial or complete, of speech, as a phenomenon coincident with cerebral hæmorrhage, softening of the brain, general paralysis, different forms of insanity, wounds of the encephalon, and all the various diseases of which the brain is the seat. Aphasia has been observed as a symptom of many diseases, but never as a morbid entity. This is what the clinical history of the disease showed. As regards its morbid anatomy, Bouillaud and Parchappe cited cases which, in their opinion, seemed to localize the power of speech in the anterior lobes of the brain; but this was only a very partial view of

the case. M. Cérise touched upon the psychological side of the question, and put some questions very puzzling to those who would localize speech in one particular part of the brain. He pointed out the relation between the thoughts and the power of speech. Thought is the internal voice; speech, the external. But what know we of the seat of thought in the brain? And, if we cannot localize the internal voice, how can we pretend to localize its external expression?—*Med. and Surg. Reporter*, from *Brit. Med. Journal.*

Another Indictment of Oidium.—It is stated that in France cases have occurred in which inoculation with *Oidium Tuckeri*, the fungus which causes the vine disease, has proved fatal to human beings. Wounds accidentally made with the instrument used for cutting off the diseased vine-shoots, have presented, according to Dr. Collin (Medical Inspector of the Mineral Waters of St. Honoré, Nièore), marked evidence of poisoning. Messrs. Desmartes and Bouche, of Vittrany, have also concluded from their experiences that deleterious effects are produced by the oidium, but they seem rather disposed to establish a coincidence between the epidemic development of the oidium and a greater frequency of certain forms of inflammation of the mucous membranes.—*Am. Druggists' Circular.*

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, September 23d, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	45	56	101
Ave. mortality of corresponding weeks for ten years, 1853—1863	47.8½	45.3	93.1
Average corrected to increased population - - - - -	00	00	101.62
Death of persons above 90 - - - - - - - - -			

Communications Received.—Surgical Cases at Boston City Hospital.—Errors in Diagnosis.—Third Annual Meeting of the Ophthalmological Society at Heidelberg.—Resection of the Humerus.—Imperforate Hymen.—Cases of Ovariotomy.—Spotted Fever.

Books Received.—Lectures on the Diseases of the Stomach. By William Brinton, M.D., F.R.S. Philadelphia: Lea & Blanchard.—The Use of the Laryngoscope in Diseases of the Throat. By Morell Mackenzie, M.D. Lond., M.R.C.P. Philadelphia: Lindsay & Blakiston.—Physician's Visiting List, 1866. Philadelphia: Lindsay & Blakiston.—Lectures on Inflammation. First Course. By John H. Packard, M.D. Philadelphia: J. B. Lippincott & Co.

Married,—In this city, 21st inst., Dr. James G. Porteous, late of the 46th N. Y. Vols., to Miss Sarah Frances Wilbur, of Boston; 12th inst., Charles Hosford, M.D., of Thompson, Conn., to Miss Helen E. Gay, of Boston.—In Hollis, N. H., 20th inst., Dr. C. H. Bill, of Nashville, Tenn., formerly Surgeon 15th U. S. Infantry, to Miss Mary J. Worcester, of Hollis.—At Dalton, N. H., 18th inst., Dr. Wm. H. M. Howard, of West Fairlee, Vt., to Miss Catharine A. Sumner, of Dalton.

Died,—In Cambridge, Sept. 24th, suddenly, of heart disease, Dr. Charles F. Foster, aged 47 years.

Deaths in Boston for the week ending Saturday noon, September 23d, 101. Males, 45—Females 56. Accident, 1—anæmia, 1—apoplexy, 1—disease of the bowels, 1—congestion of the brain, 4—disease of the brain, 3—bronchitis, 2—burns, 1—cancer, 1—cholera infantum, 13—consumption, 15—convulsions, 1—croup, 2—cyanosis, 1—cystitis, 1—diarrhœa, 2—diphtheria, 3—dropsy, 1—dropsy of the brain, 3—dysentery, 8—bilious fever, 1—typhoid fever, 4—typhus fever, 1—hæmatemesis, 1—infantile disease, 1—congestion of the lungs, 2—inflammation of the lungs, 3—marasmus, 3—old age, 1—pemphigus, 1—peritonitis, 1—premature birth, 5—puerperal disease, 1—syphilis, 2—teething, 2—unknown, 4—ulcers, 1—whooping cough, 2.

Under 5 years of age, 48—between 5 and 20 years, 10—between 20 and 40 years, 20—between 40 and 60 years, 13—above 60 years, 10. Born in the United States, 75—Ireland, 20—other places, 6.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL

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SURGICAL CASES, FROM THE RECORDS OF THE CITY HOSPITAL, BOSTON.

REPORTED BY DAVID W. CHEEVER, M.D., ONE OF THE VISITING SURGEONS.

[Communicated for the Boston Medical and Surgical Journal.]

Second Paper.—FIVE CASES OF PARTIAL AMPUTATION OF THE FOOT.

CASE I.—*Injury of the Foot; Lisfranc's Operation followed by Amputation.*—(Under the care of Dr. Cheever.)—Michael L., on the 18th of April, 1865, had a sheet of boiler-iron fall on the dorsum of the foot, about an inch behind the base of the toes. The skin was lacerated and bruised; the first and second toes fractured, and the others badly contused. What, at first sight, appeared a comparatively trivial injury, in two days had run into erysipelas, and in four into gangrene of two toes, and sloughing across the line of the wound on the dorsum of the foot. He was treated at this period with egg-nogg, beef-tea, and tinctura ferri muriatis in drachm doses; the foot kept moderately warm, and incisions made into the inflamed parts. The patient was of a peculiarly nervous, irritable and timorous organization, and evinced throughout much repugnance to any operative measures. A line of demarcation having defined the great and second toes, and the sloughing across the base of the others being superficial, on the 26th, a week after the injury, these two toes, and the heads of the corresponding metatarsal bones, were removed. In a few days it became evident that necrosis was taking place in the shafts of the amputated metatarsal bones, and during the succeeding four weeks the patient had several attacks of erysipelatous inflammation, and became considerably reduced, although during part of this time he was able to sit up. Always opposed to any explorations, he was finally induced, on June 11th, to have something more done. Being very desirous to save all of the foot possible, I confined myself to removing three fourths of an inch of dead bone from the first metatarsal, and some scales and spiculæ from the adjacent soft parts. It was evident that some more radical measure would have to be employed eventually, but it was thought proper to

defer it until the patient should consider it and consent. In ten days, having meanwhile suffered more sloughing and constitutional irritation, he consented to *Lisfranc's operation.* This I did on June 21st, and found the articular surfaces and flap looking quite well. There was only moderate hæmorrhage, and but for the known irritability of the patient, it seemed to promise a good result. The sutures were removed in four days, and the ligatures came away in six. Union was moderately good over the top of the flap, but the pulse kept up high, and there was much irritation, which culminated on the 29th in another patch of erysipelas on the ankle and up the leg. The two depending portions of the incision began to discharge a dirty pus; the constitutional irritation increased day by day. Restless, painful nights were succeeded by despondent days. The complexion became straw-colored; the stomach irritable, alternating with diarrhœa.

July 5th.—An abscess was opened above the inner malleolus. Things went on from bad to worse, a probe passing through the stump from one side to the other; new abscesses collecting and burrowing, with a thin, sanious pus, and dead bone could be felt in various directions. After the strongest representations of his danger to himself and friends, the patient finally consented to amputation. It was done on July 23d, a month after Lisfranc's operation, the leg being removed midway between the knee and ankle. Oval skin flaps were made in front and behind, and a circular section of the soft parts where the bones were sawed. These flaps came together without the slightest tension, and the ends of both bones were well obliqued and rounded with the saw and forceps. On examination of the stump, it was found thoroughly diseased in every articulation. The three cuneiform bones were spongy wedges of caries; the cuboid and scaphoid were nearly as bad; the articulations of the astragalus and os calcis were likewise affected, and offensive pus was found in the ankle-joint, and even in the inferior articulation of the tibia and fibula. Commencing at Lisfranc's joint, every articular surface was successively riddled by disease. Subsequently to the amputation he went on well, notwithstanding his pain and irritability, and a threatened protrusion of the tibia through the anterior flap, which danger was averted by slinging the stump on a tin splint. He was discharged, well, in four weeks, and it is worthy of remark that the erysipelas, to which he was so subject, ceased as soon as the cause of irritation, the carious tarsus, was removed, showing that his recurring attacks were not due to any bad hygienic influences in the hospital, although he was himself a standing focus of contagion to others.

Case II.—*Crush of Foot; Chopart's Operation; Subsequent Amputation.*—(Under the care of Dr. Cheever.)—June 24th, 1865. Thos. O'N., æt. 23, laborer; a moderate drinker; fair health. A gravel-car ran over metatarsus and phalanges of left foot, producing

laceration of inner side of foot and plantar aspect of toes, and fracturing two toes. Next day, first and second toes cold and blue; constitutional state irritable. Following day, three toes cold; great toe black and vesicated.

June 27th.—Line of demarcation forming on dorsum, two inches above base of toes. Does not complain of much pain. Blush of erythema and red lines extending above ankle. Tarsus swollen and œdematous, but normal on plantar aspect. Very timid, irritable and depressed.

28th.—On consultation, *Chopart's operation* was advised, as affording a fair chance of success, and being as low as it is safe to go. The operation found the articular surfaces healthy, but the flap looked poorly, the muscle being dark and congested, and the sheaths of the flexor tendons a little discolored with a yellow, semi-purulent look. These portions were dissected out. The tendo-Achillis was divided subcutaneously, the flap brought up firmly by sutures and broad straps.

July 3d.—The ligatures had all come away; the flap was hitched on by granulations; he looks pretty promising, but the pulse has ranged from 100 to 136 for the week past. Stimulants and food freely given.

4th.—A little secondary hæmorrhage. Spasmodic retention of urine. For the next fortnight a good deal of pain. No firm union. A little occasional hæmorrhage. Generally running down.

22d.—Two counter openings for pus, which had burrowed up the leg, made beside either malleolus; a good deal of pus. Pulse keeps very high. Much suffering. Failing.

July 26th, one month after the primary operation, a secondary amputation was performed—his consent having finally been obtained. Amputated at middle of leg by oval skin flaps. On examining tarsus, very extensive disease was found, extending, as in the other case, through all the articular surfaces, to the ankle-joint.

Section of the tendo-Achillis found it firmly united by a granular material—strong and slightly elastic. One month since section.

During the following week, patient appeared relieved of a load. Some sloughing of flaps; a little necrosis coming on—but, on the whole, doing well, up to this date, Aug. 23d, 1865.

Case III.—*Injury of Foot, followed by Gangrene; Lisfranc's Operation; Subsequent Amputation; Death.*—(Under the care of Dr. Stedman.)—May 25th, 1865. George F., æt. 23, a native of Gibraltar, and a soldier. Six days ago had the great toe run over by a horse-car. Has now a dark, gangrenous-looking slough extending up nearly to the tarso-metatarsal articulation. General health fair.

May 28th.—Not so well. No appetite. Ordered ale.

June 2d.—Foot red and painful. ℞. Tinct. ferri mur., gtt. xxx., secundis hôris.

7th.—Slough extending. Operation deferred until limits are more defined.

14th.—Lisfranc's operation performed; but little hæmorrhage.

16th.—Doing well. Not much constitutional disturbance.

19th.—A little sloughing on inner side of flap. Eight ounces of wine daily.

22d.—Diarrhœa.

25th.—Foot looking better under a chlorinated poultice.

28th, 29th and 30th.—Foot very much inflamed and painful. Aspect as of extensive disease of tarsus. Constitutionally failing. Diarrhœa at intervals. Hectic.

July 1st.—Leg amputated three inches above ankle by two oval flaps; parts look rather congested; but little blood lost.

6th.—Wound looks dark and sloughy. Free stimulation.

8th.—Very weak; no appetite; tongue dark; pulse 120; delirium; diarrhœa. Large slough separating.

12th.—Seems better since slough came away. Bones denuded for two inches; edges of wound granulating. Beef-tea, porter and rum.

15th.—Diarrhœa again.

17th.—Delirium, very prostrate.

23d.—At a consultation it was decided that he was too feeble to bear any removal of necrosed ends of bones.

30th.—Died—one month after the amputation, six weeks after the tarso-metatarsal amputation, two months since the injury was received.

Case IV.—*Inflamed Bunion of Great Toe, followed by Disease of Metatarsal Bones; Lisfranc's Operation; Good Recovery.*—(Under the care of Dr. Stedman.)—March 22d, 1865. E. W. W., æt. 35, entered hospital for disease of metatarso-phalangeal joint of great toe—an inflamed bunion having suppurated, opening joint, and followed by necrosis. Great toe and head of metatarsal bone amputated to-day.

25th.—Wound healthy, but suppurating. Stimulants.

April 1st.—An abscess evacuated on instep.

11th.—Abscess formed and opened at junction of second and third toes.

22d.—Abscess formed in sole.

28th.—Dead bone found at second toe.

May 3d.—Foot examined under ether. Dead bone found as high as first row of tarsal bones, and involving several metatarsals. Wife would not consent to operation.

10th.—Lisfranc's operation done by Dr. Stedman.

12th.—Wound looking well.

14th.—Good appetite. But little pain.

16th.—Foot strapped. But little discharge.

22d.—Nearly healed.

31st.—On crutches.

June 6th.—Discharged well, four weeks after Lisfranc's operation. Has since been seen with a boot on, walking quite well.

Case V.—*Gun-shot Necrosis of Os Calcis and Astragalus; Operation; Recovery.*—(Under the care of Dr. Cheever.)—July 28th, 1865. Daniel G., æt. 21, was wounded in the heel by a Minié ball, before Petersburg, March 31st, 1865, four months ago. A piece of shattered bone worked out in two weeks. Has had four or five pieces removed since, without the use of the knife. Abscess formed and opened twice. Now, a sinus below insertion of tendo-Achillis, where dead bone can be felt. Hot and feverish; foot swollen and painful.

July 29th.—Patient very feverish this morning. Foot and ankle more swollen, red and glazed. Constitutional disturbance great. Aspect of foot so threatening as to suggest immediate interference, in order to save the member. A rectangular flap was made over back of heel. A large carious cavity was found in posterior part of os calcis. Much dead bone was gouged out. After this had been satisfactorily accomplished, it was found, to our regret, that a probe passed freely along the outer side of foot, to a point just below the outer malleolus. An incision was made the whole length of the director; pus escaped, and more dead bone was found. This was in the posterior and external calcaneo-astragaloid articulation, not communicating with the malleolar (fibular) joint. A segment, one fourth of an inch in diameter, was gouged out of this cavity, embracing parts of both bones. Everything now appeared sound, except a superficial sinus running down into the sole. Here a free counter-opening was made. The wound was partially closed with silver sutures, and cold water applied. Beef-tea and opiates ordered.

30th.—Patient looks better. Less fever; appetite improving; less heat and swelling of foot.

August 5th.—Has improved very fast. Wound filling up with granulations; only one small slough remains; no great suppuration.

19th to 22d.—Abscess formed and was discharged on outer side of foot.

25th.—About four weeks since operation. Sits up, and doing extremely well. Wounds fast closing. No bone to be felt. Foot getting natural in size. No fever. Appetite good. Every prospect of an excellent foot, where, one month ago, extensive caries of tarsus and ultimate amputation threatened.

In reviewing these cases, we are struck by the fact, that the last one, apparently as unpromising as any of them, made an immediate and excellent recovery, while only one of the remaining four escaped subsequent amputation; and we are led to ask whether some other reason than chance or coincidence may not be found to account for the greater success of partial removal of bones of the tarsus by

excision or gouging, than by the amputations through or below the tarsus.

Taught by the experience of four years' warfare, our army surgeons, we are told, prefer amputation above the ankle to Lisfranc's, Chopart's, or Syme's amputation of portions of the foot. The exigencies of crowded hospitals, of transportation, of depressing causes and epidemic influences have wisely led them to discontinue operations whose chances of success are so largely governed by all these influences. In civil surgery such influences do not, or should not exist; but we think other anatomical and pathological reasons can be found which largely influence the results of partial amputations of the foot.

It is not a favorite operation in this country to amputate at the articulation of the radius with the scaphoid and semi-lunar bones (commonly called amputation through the wrist-joint); but would not that surgeon be deemed more than bold who should amputate between the two rows of carpal bones, or, were it feasible, at the junction of the carpus and metacarpus; and yet the same thing is advised and done on the foot, although the lower extremity has notoriously far less vitality than the upper. Setting aside, first of all, the need and desirableness of saving all of the foot possible to walk upon, whereas an inch more or less at the wrist is of little consequence, and also the smaller size of the carpal bones, which may render them more vulnerable to caries, we yet find at last certain identical conditions peculiar to each, which militate against partial amputation. These conditions are the *arrangement and inter-communication of the synovial surfaces.* Four such surfaces are more commonly described in the foot, although six properly exist. The *first*, small and distinct, at the posterior articulation of the astragalus and os calcis. The *second*, larger, at the anterior articulation of the astragalus and os calcis, and of the astragalus and scaphoid. The *third*, distinct, between the cuboid and os calcis. The *fourth*, the great synovial membrane, running through seven articulations, and uniting the scaphoid, the three cuneiform and the second and third metatarsal bones. A more or less distinct synovial cavity unites the fourth and fifth metatarsals to the cuboid; and a small, separate cavity, analogous to that of the metacarpal bone of the thumb and trapezium, lies between the metatarsal bone of the great toe and the internal cuneiform.

Now Lisfranc's operation, or amputation at the junction of the tarsus and metatarsus, opens the synovial surface of every articulation of the tarsus, as far back as Chopart's joint, in front of the astragalus and os calcis. In other words, the three cuneiform, the scaphoid and the cuboid bones are all laid open to the access of pus, of decomposing gases and of the air, provided that primary union does not take place. What follows? The strong survive, the weak succumb. The vigorous constitution, not debilitated by bad habits, and the subject of Lisfranc's amputation, if under good hygienic in-

fluences, with a well-shaped flap, firmly adjusted, successfully goes through with what we may here truly call the *great task* of healing. Four articular cartilages, and one—the cuboid—a large one, must heal by first intention, without ulceration; and four extensive synovial surfaces must be promptly sealed by lymph. If all this be accomplished, we get a most useful foot. But, in the feeble subject, or the badly nursed, we have, first, probably, almost immediate union of the upper surface of the wound, which may deceive us into hopes of a good result; but very soon sinuses are formed in the two corners of the plantar flap, whence pus, at first laudable, and soon foul, sanious and oily, indicates too surely what is concealed within. The probe detects denuded bone on the extremities of the cuboid or cuneiforms, or all of them. And the mischief does not stop here. The whole tarsus swells and reddens; the skin grows puffy, shining and œdematous; pus burrows superficially towards the heel, and behind either malleolus; hectic, prostration and erysipelas ensue. The evil creeps on from one synovial surface to the next, until, pent up in the interior of the tarsus, the caries overleaps the septa which divide these articulations from those of the astragalus and os calcis. By this time, or long before, the patient is on the point of succumbing, unless amputation be immediately performed. We cannot better typify these results than by repeating from the record of the first case in this paper—"Constitutional irritation increased day by day. Restless, painful nights were succeeded by despondent days. The complexion became straw-colored; the stomach irritable, alternating with diarrhœa. A probe passed through and through the stump; new abscesses collected and burrowed, with thin, sanious pus, and dead bone could be felt in many directions. On examination of the stump after amputation, it was found thoroughly diseased in every articulation. The three cuneiform bones were spongy wedges of caries; the scaphoid and cuboid were nearly as bad. The articulations of the astragalus and os calcis were likewise affected, and offensive pus was found in the ankle-joint, and even in the inferior articulation of the tibia and fibula."

Amputation through the tarsus, commonly called Chopart's operation, is done at the articulation of the scaphoid and astragalus, on the inner side, and the cuboid and os calcis on the outer. The latter is a separate synovial surface; but the former communicates with the anterior calcaneo-astragaloid articulation. To a limited extent it is, therefore, liable to the same objections as Lisfranc's operation, since it opens the way for pus and caries between the astragalus and os calcis, and ultimately to the ankle-joint. While running an equal risk, the stump which it leaves is not so desirable as that of Lisfranc's, since it is so short as to be tilted downwards by the action of the sural muscles, unless the tendo-Achillis be divided.

It is not part of our purpose to speak of Syme's operation, amputation at the tibio-tarsal articulation, or Pirogoff's modification of it

by retaining a portion of the os calcis, in this paper. For this amputation through the ankle joint opens only one articulation, and the articular ends of the tibia and fibula are also sawn off. The only danger attending it, over ordinary amputations, depends upon the vitality of the flap; and the only question of expediency is as to the usefulness of the stump.

The stump left by Lisfranc's operation is an excellent one for practical use; but in any partial amputation of the foot above the tarso-metatarsal line, it is doubtful whether so good a stump can be obtained, or so good an artificial foot adjusted, as after an ordinary amputation of the leg. For it is to practical results entirely that we should look after the unavoidable mutilation of an amputation, and to them alone.

What reason can now be assigned for the prompt success of the fifth case reported? Here was caries of four months' duration, which had travelled to the posterior articulation of the astragalus and os calcis, pus burrowing into the sole, and a condition of constitutional disturbance threatening amputation. It seems to us that the result was due—first, to the prompt and very free incisions which gave exit to every source of irritation; second, to the fact that *the posterior calcaneo-astragaloid articulation is a single synovial surface.* Fortunately the disease had penetrated no farther, and although both astragalus and os calcis were freely gouged here, no other articulations were opened.

It has been noticed by surgical authors that the prognosis in idiopathic caries of the tarsus varies with the seat of the disease, and the chances of benefit by interference, as well; caries of the cuboid, astragalus, or os calcis, being much more amenable to treatment by excision and gouging, than disease of the scaphoid and cuneiform bones, where larger synovial surfaces are necessarily involved.

By a parity of reasoning, the same rules should apply to partial amputations of the foot—though, so far as we are aware, they have not been definitely laid down. For although instances undoubtedly occur in which entire bones, even the astragalus or os calcis, are removed by excision for disease with success, we must still adhere to general rules, and not to brilliant exceptions dependent on peculiar vigor of the patient. Certainly, the same reasons which influence us against opening other joints should hold good in a locality so prone to disease as the tarsus.

It remains to be seen what modifications of these operations have been proposed, or can be suggested to lessen their risks.

In the year 1799, antecedent to Lisfranc, Mr. Hey first did a partial amputation of the foot, which has borne his name in England since that time. This amputation consisted in disarticulating the four lesser metatarsal bones from the tarsus, and sawing through the internal cuneiform. Except for its greater facility of performance, over what has been regarded as an anatomical *tour de maitre* in the

operating theatre, this operation is in nowise better than the disarticulation of the tarsus and metatarsus proposed by Lisfranc; for the great synovial cavity communicates with the second and third metatarsals, which Hey opens, and not with the first metatarsal, which he avoids by the saw.

On the other hand, we may safely open the joint of the first metatarsal and internal cuneiform with the knife, and saw across the other four metatarsal bones. Thus we avoid synovial cavities.

On the whole, the best amputation of the metatarsus is probably to cut through the skin only, over Lisfranc's joint, and to saw all five metatarsals below the articulation, covering them with the plantar flap, as in the usual way; and the cases calling for partial amputation in this vicinity must be few, in which it would not be possible to get sound tissue and skin enough to cover the one as well as the other amputation.

Of amputations through the tarsus, if we either do Chopart's operation, or even saw the head of the astragalus, we open the anterior calcaneo-astragaloid articulation. We may more safely disarticulate the cuboid from the os calcis, and the scaphoid from the cuneiforms, leaving the scaphoid in, thus saving the anterior calcaneo-astragaloid articulation, which communicates with the astragalo-scaphoid joint; or, if it be feasible, we may saw across both scaphoid and cuboid, without opening other articulations.

Lastly, what seems most feasible, disarticulate at the junction of the scaphoid and cuneiforms, and saw across the cuboid on the same line; making not more than one third of an inch difference in the length of the stump from Chopart's disarticulation.

Until further experience shall have changed our conclusions, we are inclined to believe, therefore:—*First,* That for any injury about the foot requiring amputation of the toes and metatarsal bones, it is safest to amputate by sawing, half an inch below Lisfranc's joint.

Second, That sawing through the tarsus or the cuboid, is preferable to Chopart's amputation.

Third, That for safety and practical results, amputation through the ankle joint by Syme's method is preferable to any amputation through the tarsus.

Fourth, That for good use in after life, a stump above the ankle is probably better than any made below, unless it be anterior to Lisfranc's articulation.*

We should certainly bear in mind the low vitality of the inferior extremity as compared with the superior, and the rough usage which an amputated foot has got to endure, before we apply conservative surgery too rigidly to this portion of the body.

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* Since writing the above, we have received descriptions and cases of *apparatus for Syme's amputation*, from Dr. Hudson, of New York, which he claims to give excellent walking power—better even than an artificial limb attached above the ankle.

RESECTION OF THE HUMERUS.

By William B. Reynolds, M.D., late Army Surgeon.

[Communicated for the Boston Medical and Surgical Journal.]

Corporal Kirk, of 1st Maine Heavy Artillery, received a gunshot wound in the left arm, Nov. 4th, while doing picket duty in front of Petersburg, and was taken immediately to the Field Hospital. He had not lost a great amount of blood, for the ball in its passage left the brachial artery uninjured. He was suffering severely, however, and complained greatly of thirst, yet he was in good spirits. He was considerably depressed, shivering, and had a rapid and feeble pulse. He possessed strong constitutional powers, and had a fine physique, and soon rallied under the use of stimulants freely administered. In an hour, reaction was so well established that he was in a good condition for examination and operation.

After chloroform was administered, a careful examination revealed extensive comminution of the humerus, as high up as the surgical neck, and the spiculæ of bone were driven into the surrounding soft parts so extensively, and the muscular structure was so bruised, that it felt and appeared like a pulpified mass and was completely disorganized. The army then being quiet and removal any further to the rear being unnecessary, it was judged advisable to resort to conservative surgery, and resection of the bone was determined upon instead of amputation, either at the surgical neck or at the joint, should dissection show the joint to be unopened. I at once made an incision in a line of the axis of the bone, down to the bone and sufficiently free to completely expose the lacerated parts and comminuted bone. The careful separation of the periosteum from the bone up to the highest point of fracture, showed that the joint was not opened, and the tuberosities and anatomical neck were not implicated. This proved the correctness of the diagnosis. The soft parts being then carefully guarded by the fingers of the assistants and the necessary instruments, the bone was then divided with the chain saw. I then separated the periosteum from the fragments and the other fractured end of the bone, and sawed it also with the chain saw at the lowest point of fracture, and taking plenty of time, carefully removed every particle of bone, of which there was almost an endless number.

The patient was shot at such short range that the ball had lost none of its velocity, and a portion of the bone was coarsely powdered, rendering the operation very tedious, and considerable time was consumed in removing the minute particles. Portions of the pulpified muscles were cut away, and the wound thoroughly cleansed. Several large nerves were exposed, as was also the brachial artery, but fortunately they were uninjured. Several sutures were introduced, and the wound was dressed with adhesive plaster and water dressing applied. The arm was then laid in splints, a broad one

beneath, and a roller sufficiently tight to keep the splints in their proper position completed the dressing.

He readily rallied from the influence of the chloroform and was carried to bed and half a grain of morphine at once given, as he was suffering severe pain after the anæsthetic effects of the chloroform had passed away. Owing to the excessively comminuted condition of the bone, it was impossible to state precisely the amount of bone removed, but it was judged to be two and a half inches. No attempt was made to approximate the ends of the bone at this dressing, judging it best to wait until the natural contraction of the muscles should be restored after the effects of the chloroform had passed away and the patient had rallied from the depressing effects of the injury and the operation.

Nov. 5th.—He rested well last night, and is cheerful this morning. Reaction is severe, and the arm quite painful. Cold water to be frequently applied and the dressing to be loosened. Complains of pain in the head and back. Pulse 100, full, and the tongue is coated with a white fur. ℞. Pil. cath. comp., No. iv. at once. The pills operated three or four times, sensibly abating the feverish symptoms and relieving the pains in the head and back. ℞. Pulv. ip. et op., gr. xii. in the evening.

Nov. 6th.—Rested tolerably well last night, and is perfectly free from pain. Has some appetite. Low diet and perfect rest enjoined. Suppuration has commenced, and the wound looks well. Continue dressings, and Dover's powder at night.

From this time until the 15th, there was no material change in the dressings and very little medication was necessary. The arm was kept in splints, and at this time the ends of the bones were nearly approximated and there was very little pain, but the suppuration was profuse. Appetite very good, with a liberal diet.

From the 15th to Dec. 1st, the case progressed very favorably. The profuse suppuration, however, sensibly reduced him, and a free diet, after the second week, was ordered, and stimulants also after the febrile reaction had abated. By these means his strength was kept up, and he was in excellent spirits during the whole of the time he was in hospital.

At the end of four weeks, our division was ordered to be in readiness to move, and he, with the other sick and wounded, was sent to City Point, and I heard nothing from him for a month. At the end of four weeks he wrote to his regimental surgeon, Dr. Elkins, that he was quite well and the wound nearly healed; that there was very little suppuration; that the arm then was vastly better than none, and that he could carry it unassisted out from the body at an angle of forty-five degrees, and thought that eventually he would be able to raise it to a level with, and perhaps carry the hand to the head. He wrote again some time subsequently, and stated that his arm was constantly improving, and expressed great gratitude that it was not

sacrificed. I am unable to trace the case any further, but have already traced it sufficiently far to convince me that, instead of having a pendent and worthless member, he will have, in good time, a useful limb.

During the rush of a campaign, so vigorously pushed as was Gen. Grant's, inaugnrated at the Wilderness and ending in front of Petersburg, when the hospitals were so crowded, and many things operating to paralyze the best efforts of the surgeons and confuse the best laid plans, it is not surprising that some limbs are sacrificed that could, under more favorable circumstances, have been saved. Ambulance transportation, the heat and dust, improper diet on the route, and the want of such attention from nurses as severe cases require, combined with the depressing effects of the injury, and the reaction not being controlled by the proper remedies and attention, all these together have destroyed thousands of limbs and mutilated a long catalogue of American heroes; and I am satisfied that in this case, of which I have given an imperfect outline, if the patient had been compelled to ride in an ambulance many miles, as very many did early in the campaign, and the operation had been deferred two or three days, he would have lost the arm at the shoulder-joint, if not his life.

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE PROVIDENCE MEDICAL ASSOCIATION. BY W. H. TRAVER, M.D., SECRETARY.

Dr. Traver reported the following case of *hernia cerebri*. June 2d, 1863, he was called to see John McN., aged four years, who had fallen from a first-story window, striking his head upon a sharp stone, fracturing the upper and left part of the os frontis, rupturing the membranes and wounding the tissues of the brain. Pieces of the cranium, the size of a ten-cent piece, were taken out. A triangular piece of window-glass, about half an inch in length, was found embedded in the brain. The opening in the scalp was partially closed by means of the interrupted suture and adhesive straps. The sutures came away in due time; the strap becoming disarranged, a portion of the brain, about three fourths of an inch in diameter, protruded and extended seven eighths of an inch above the surface of the cranium. The hernia, or protruding brain, was excised, and a piece of patent lint saturated with lime water was placed over the orifice, and in immediate contact with the brain. Over this a graduated compress and bandage. The wound was dressed daily, and the lint kept saturated with the lime-water. The slightly astringent properties of the lime-water produced a contraction of the brain in the aperture of the cranium, and, together with the compress, caused it to recede below the surface. The wound in the scalp healed kindly. Little or no pulsation can now be felt.

Dr. COLLINS reported the following cases:—

A Glass Pessary remaining in the Vagina fifteen years.—Dr. Collins exhibited a glass pessary which had been worn without removal for fifteen years.

It was introduced by Dr. L. L. Miller of this city, in June, 1850, when the patient was upwards of sixty-five years old, and was removed by Dr. C. in July, 1865, when she was upwards of eighty.

The pessary was the usual circular perforated glass disc, two inches and three quarters across. Its presence, at the time of its removal, was producing much irritation, giving rise to a copious offensive discharge, with much disturbance of the bladder. The removal was attended with much difficulty and considerable suffering, owing to the atrophy of the parts from age.

It was effected after bringing the instrument to the outlet, by passing the finger into the rectum and expelling it by considerable force from above. The effect upon the surface of the glass, from long and continued subjection to the action of the secretions, was remarkable. The surface of the glass was irregularly covered by a whitish, chalky-looking substance, very difficult to remove. The action of strong nitric acid upon it caused effervescence, and effected its removal after washing and rubbing. After the removal of the deposit, the greater portion of the surface of the glass was found roughened, and in some places quite deeply corroded. What the peculiar product is, which is formed in this part of the female system, having the power of corroding glass, he leaves for the chemists to determine. The facts in the case were very apparent.

Absence of the Vagina.—This patient was a strong, well-formed Irish domestic, 22 years old, who presented herself to Dr. C. for advice, for the reason that her menses had never appeared. Her health had not suffered further than that she had had, once a month, headache and some pain in the back and legs, which generally disappeared in a few days. Her age and general healthy appearance suggested the possibility of some defect in the organs themselves, and before prescribing for the case, an examination was deemed important. This revealed the fact of an entire absence of the vagina.

The external organs were rather small.

The bladder opened naturally. A small sulcus below the meatus marked the locality of the os externum, but beyond there was nothing to indicate any attempt at the formation of a canal. With a catheter introduced into the bladder, and the finger into the rectum, nothing could be felt except the rectal and vesical walls. It was thought that the womb could be felt per rectum, but there was no accumulation of menstrual fluid either in the womb, or in any pouch below it. The sexual inclinations were normal.

The case was one which did not appear to admit of any relief.

Fibrous Tumor weighing half a pound removed from the breast of a girl of fourteen.

The patient was a young colored girl of fourteen, of small stature, but fully developed. The tumor had existed for about three years, and had grown rapidly for some time previous to removal. It was situated above the left nipple, lying partially imbedded in the gland. It gave a distorted appearance to the chest, and a very uncomfortable sense of weight and dragging. It was very movable, and surrounded

by condensed cellular tissue. It was removed by two transverse elliptical incisions. The wound healed by the first intention throughout.

Rupture of the Stomach by a Fall.—This extremely rare form of injury occurred in a perfectly healthy boy, thirteen years old.

It happened on the 12th of August. He was attending a boarding-school in this city, and having just eaten a hearty dinner, climbed into a tree, from which he fell to the ground, a distance judged to be about twelve feet. He struck upon level ground, with his face downwards. He made an effort to break the fall with the hands, by which one of his wrists was dislocated and the other injured.

He was taken up unconscious, but recovered immediately. Dr. C. saw him about one hour after the fall. He was found lying upon the back, with the knees drawn up, and the hands, notwithstanding the injury at the wrists, crowded under the middle of the back. He was perfectly conscious, pupils dilated, face pale, skin warm, pulse not strong but very good. He complained of great pain and distress in the epigastrium. There were frequent attempts at vomiting, which only resulted in bringing up small quantities of his recent meal. There was also occasional hiccough. The reporter gave a small dose of morphine, with a little brandy. On visiting him again, four hours later, it was found that his attempts at vomiting had been repeated at intervals. He had twice, at his request, been placed upon the close-stool, and had each time some motion from the bowels, passing also some urine. He had called for, and drank, large quantities of cold water. His position was the same, except that the hands were not under the back. Mind clear, pupils dilated, extremities moist and cold; no pulse at the wrist. The abdomen was painful and tender all over, and much distended. It was clear that death was rapidly approaching. He died in about three hours more, or in less than nine hours from the fall. The mind remained clear until a short time before death, which was easy.

On opening the abdomen the following day, between two and three quarts of yellowish fluid was found, in which was floating the undigested food of the last meal. The contents of the stomach had escaped through a rupture two inches in length, situated upon the anterior surface and very near the pyloric extremity.

Injury to the Odontoid Articulation followed by Exostosis.—The specimen exhibited was taken from a man about 58 years of age, who received an injury about seven years ago by a man falling from a great height and striking upon his head while he was standing. The injury produced some paralysis of the body at the time, and though recovering so as to walk imperfectly, he remained an invalid ever after, and finally died in July last from disease of the kidneys and bladder. The patient was not at first under the care of any physician. An exostosis was found upon the anterior and articulating surface of the odontoid process, of the thickness of the eighth of an inch, and extending above the process, thus elongating it nearly one fourth of an inch. A corresponding exostosis of nearly the same thickness was thrown out from the surface of the atlas where it articulated with the odontoid.

The motion of the articulation was preserved. The ligaments of the articulation were much thickened. The elongation of the process encroached upon the spinal marrow, greatly deranging its functions during the latter part of his life.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, OCTOBER 5, 1865.

THIRD ANNUAL MEETING OF THE OPHTHALMOLOGICAL SOCIETY AT HEIDELBERG.—Through the kindness of our friend Dr. Hasket Derby, we are enabled to present to our readers this week the first account which has reached America of the recent meeting of the most distinguished oculists of Europe, in Heidelberg. Dr. Derby visited Europe purposely to attend this congress, and it is gratifying to know that our country was so well represented in it, both by him and by Dr. Agnew, of New York. In no department of our art has there been so much earnest work done within the last ten years as by our students in modern ophthalmological science, and in Boston particularly several of the most gifted young men in the profession have devoted themselves exclusively to its study under the most eminent of its founders and masters. The fruit of this zeal cannot fail to be the foundation of an American school of ophthalmic surgery second to none in the world.

Our readers in this vicinity will be pleased to hear that our correspondent has enjoyed his short vacation, and is already upon his return voyage.

HEIDELBERG, Sept. 7th, 1865.

DEAR W.,—The third annual session of this Society has just come to a close. It may be well to preface a brief account of its proceedings by relating the circumstances of its origin.

These were simply as follows. It had long been a habit of Prof. von Graefe to spend a few days of his summer vacation at Heidelberg, and, for the convenience of a few of his personal friends and favorite pupils, to specify in advance the time of his coming. Short, informal meetings were held, and opinions freely interchanged on the prominent ophthalmological topics of the day. Gradually the number and reputation of those attending these annual gatherings increased to such an extent as to render it desirable, for the cause of science, that a definite organization should be effected, and the proceedings of each year properly collected and published. Thus the Ophthalmological Society came into existence. The sessions are held annually in this town, and last from two to three days. Any physician or man of science who is especially interested in this branch of medicine, is eligible for membership if proposed by two members. It at present consists chiefly of Germans, with a few French and English, and this year three Americans were added to its numbers. A stenographic report of its proceedings is published as soon as may be after each annual session.

The number and importance of the communications presented on this occasion render it possible to give little more than a catalogue of all and an abstract of a few.

First Day, Sept. 4th.—Prof. ARLT, as the oldest member of the standing committee, called the meeting to order. About fifty members were present. The meeting was organized by the choice of Prof. Horner, of Zurich, as President.

Prof. von GRAEFE made the first communication, taking for his subject the modified linear extraction of cataract. The principle being now conceded that the cataracts of middle and mature age can be removed bodily from the eye, with a greater chance of success than if they are pushed back into its interior, or broken up and left to absorb *in situ*, various attempts have been made to substitute other and yet safer methods to the ordinary flap extraction. At the last meeting Mr. Critchett had proposed an operation which had since been extensively practised, and which was undeniably superior to any scoop operation hitherto devised, inasmuch as a larger opening was made, and a better extracting instrument employed than the scoop of Waldan, then in common use. In order to test the comparative advantages of this method, as compared with the ordinary flap extraction, von Graefe had operated during the past year on 118 cases according to the plan of Critchett.

Of these, 7 lost the eye; 4 retained perception of light; 30 required secondary operations, such as the removal of capsule or iridectomy; 77 gave satisfactory results (vision of at least $\frac{1}{4}$).

In flap extraction, of 100 cases, in 7 the eye is lost; in 13 secondary operations are required: in 80 the result is good. Indeed, since the use of the compressed bandage even more satisfactory results are obtained, 82 cases in 100 doing well.

Comparing these results, it will be seen that in about the same percentage of cases the eye is lost, while corneal opacities and papillary closures are more common after the operation of Critchett. While, therefore, von Graefe would not accept this as a substitute for the ordinary extraction, he would employ it in cases of Morgagnian cataracts, in unripe cataracts which very slowly advance, and in cases where the chances of the healing of the corneal flap are not good. The great advantage of flap extraction consists in the readiness with which the cortical masses, which remain behind after the exit of the nucleus of the lens, can be removed. The objection to it lies in the large and gaping corneal wound; and he had a method to propose which he thought would render it possible to completely remove the lens through a small wound, thus uniting the advantages of the linear and flap procedures.

The first instrument is a long and very slender and narrow knife, which is introduced through the sclera $\frac{1}{2}'''$ from a point in the upper and outer periphery of the cornea, carried across the anterior chamber and brought out at a point on the other side. The cut is now completed in the sclera, and a small conjunctival flap is formed. Thus the anterior chamber is opened at its upper edge, no portion of the cut being in the corneal substance proper. A shorter "wound-canal" is secured and a lower inner edge than if a lance-knife had been used. A portion of the iris is then removed in the ordinary manner. Next, the capsule is lacerated with a sharp hook. If, now, the lens be soft, it can readily be made to escape by pressing at the edge of the wound; if large and hard, however, a blunt hook is passed behind it to assist its egress. This hook is constructed for the purpose, and its use constitutes a distinctive feature of the operation. It is more easily withdrawn than the scoop, and the lens is removed by traction rather than by prying, the latter manœuvre being particularly dangerous.

Von Graefe has only performed this operation in 69 cases, too small a number from which to collect statistical results of any value. None of these were lost. In 5 cases iritis ensued; in the remaining 64 the result was entirely satisfactory, vision being generally at least $\frac{1}{4}$, and some of the patients being able to read small type. The great advantage of this method over Critchett's consists in the superior certainty of a favorable result and of no complication attending the healing process. On the other hand, there is more apt to be a loss of vitreous. As compared with ordinary extraction, there is the disadvantage of an artificial pupil, though as this is made upwards the least possible derangement of excentric vision takes place.

On the whole, then, we are justified in pronouncing this method superior to that of Mr. Critchett. Time alone will show whether it is to take the place of ordinary extraction.

[This communication was received with much applause.]

In answer to a question, Von Graefe remarked that he had never seen the form of cystoid cicatrix occur after this, that sometimes followed operations for glaucoma.

Dr. Pagenstecher, of Wiesbaden, read a paper on the simultaneous extraction of lens and capsule. He had been led to devise this operation from the fact that the presence of capsule and lenticular substance after extractions was so fertile a cause of inflammatory complications. His plan was as follows. The patient being placed under the full influence of chloroform, the ordinary cut for extraction is made with the usual knife, in the sclera, however, instead of in the cornea. A broad iridectomy is next made, downwards and outwards. If any posterior synechiæ exist they are detached, after which a scoop is passed through the zonula (which, if necessary, is torn through with a hook), carried back of the lens and used to bring this out. If the state of anæsthesia has remained profound, little or no vitreous is commonly lost.

The healing process goes on well. Out of 54 times that the operation has been performed, the cornea suppurated in but two cases. Out of 38 patients who have thus been operated on this year, 30 were able to read Jaeger No. 5.

In the discussion which followed, Prof. Arlt thought the operation particularly indicated in those cases where the cataract was over-ripe, for there the zonula would be found looser. He mentioned, however, serious objections to its general execution, particularly in cases of large and soft cortical masses surrounding a small nucleus, the whole enclosed in a transparent capsule.

Dr. Ivanoff read the account and exhibited microscopical drawings of a case of retinitis.

M. Javal exhibited an apparatus for the instant determination of astigmatism, both as regards direction and amount. Whereas a case at all complicated often requires an examination of more than an hour, it was shown that this apparatus would settle the question with greater accuracy and in a very short time. It might also be used as an optometer. Interesting statements were also made as to the first observations made on the subject of astigmatism among the French.

In connection with this, von Graefe spoke of the frequent necessity of using cylindrical glasses, met with among persons who had been operated on for cataract, and who had previously shown no signs of

astigmatism. It is as if there had been a double astigmatism, and that of the cornea had been corrected by that of the lens. An interesting discussion ensued on the worth of optometers in general in comparison with the ordinary methods of determining the far and near point. In opposition to M. Javal, it was maintained by Von Graefe that the age of a person gave no accurate idea of the glass that person needed for near objects, and that the only way of determining this important point was to settle the distance required, and then, by finding out what convex and concave glasses could be overcome in this distance, to ascertain the amount of relative accommodation.

Dr. Knapp, of Heidelberg, alluded to the difficulty often experienced in operations for strabismus, particularly divergent strabismus, from the slight amount gained after each operation, and the necessity of a frequent repetition. He would avoid this, and secure a greater effect each time by drawing the eye over to the side of the antagonist of the divided muscle by means of a suture passed from the conjunctiva at the edge of the cornea to the commissure of that side. Thus if the case be a strongly marked strabismus divergens, and the rectus externus have been divided, a suture is passed through the conjunctiva on the inner edge of the cornea and the internal commissure, and the eye drawn inwards. At the end of twenty-four hours the suture is removed. In this manner it is possible to gain as much as 3‴ at a single operation. This method is also perfectly applicable to cases of strabismus with impaired action of the antagonistic muscle, where it is necessary not only to divide the former but to bring forward the latter, and would then form the last step in the operation.

Dr. Dor, of Vevey, exhibited a small but extremely ingenious instrument for the purpose of determining and indicating the amount of intra-ocular tension.

Second Day, Sept. 5th. (Presidency of Prof. Arlt.) M. Girand-Teulon, of Paris, gave a long and interesting discourse on the mechanism of accommodation and the influence on it of the membrana limitans. This elastic membrane, he endeavored by diagrams and microscopical preparations to prove, did not terminate at the periphery of the crystalline, but passed over its anterior face and was in fact separable from the anterior capsule. Its possible influence on accommodation was elaborately developed.

Dr. Leber, of Paris, gave the results of his investigations on the nutrition of the cornea. He alluded to the views of Recklinghausen on the microscopical anatomy of the same, and deduced from his own investigations that the cornea is penetrated by a system of canals, lined with independent membrane and connected with the lymphatic system.

Dr. Testelin, of Lille, related five cases of impaired vision from blows on the eye, without corresponding ophthalmoscopic symptoms.

1st.—A severe blow had been received over the eye. Only a limited portion of the retina retained its functions, the remainder having lost perception of light. No external or internal change was visible.

2d.—The same cause. The pupil was dilated and immovable; vision greatly impaired. The interior of the eye appeared normal. Three months later marked atrophy of the papilla was found to exist.

3d.—Immediately after pressure on one eye every thing appeared to be seen through a red mist. A month afterwards Jaeger, No. 20,

could be made out, only, however, with the inner portion of the field of vision. Later there was less vision. No objective change.

4th.—A stone had been thrown against the eye. The case was seen three months after the accident. The pupil was so far dilated that hardly a trace of the iris was visible. No perception of light. The ophthalmoscope revealed nothing.

5th.—The eye had been struck by a cricket ball. Vision was much impaired; the pupil dilated and sluggish. On ophthalmoscopic examination in the inverted image, a small prominence, like a pea, was seen above and to the inside of the papilla. In a month this projection had disappeared, leaving a simple spot. Vision had very slightly improved.

Von Graefe had seen such cases, and admitted them to be very difficult of explanation. He thought, however, that analogous paralyses of the motor nerves might be adduced, that, for example, where the arm becomes temporarily paralyzed from resting the head on it in sleep. Perhaps the sudden shock caused some change either in the molecular system, or in the walls or calibre of the vessels.

Dr. Nagel read a paper on double vision and double images.

Dr. Alfred Graefe alluded to the local use of caustics in cases of ophthalmia neonatorum. An objection had been made to the use of nitrate of silver on the ground that after this agent had been employed it had been found that corneal infiltrations were more frequent, and that these infiltrations often led to perforating ulcers. Some physicians had even gone so far as to give up this agent, admitting its beneficial influence on the disease, but fearing a disastrous effect on the cornea. He himself, however, had ascertained to his own satisfaction that such corneal complications only arose in those cases where the original touching had been too strong, and where, at the end of twenty-four hours, the eschar was not yet detached. He was therefore unable to sympathize with those who were unwilling to use this agent.

Dr. Knapp, of Heidelberg, exhibited several orbital tumors, as also a choroidal sarcoma.

Dr. Agnew, of New York, described an original operation for the purpose of removing membraniform obstructions from the pupil. The patient having been first brought under the full influence of ether or chloroform, a Bowman's needle is passed through the cornea, about $\frac{1}{2}$ a line from its inner edge, and made to penetrate the membrane. With a cataract- or lance-knife a small wound is next made $\frac{1}{2}'''$ from the outer corneal edge, care being taken to evacuate as little as possible of the aqueous humor. Through this last wound a small and sharp hook is now passed into the anterior chamber, engaged in the capsule at the point where it has been penetrated by the needle, and made to lacerate it. If the membrane is tough it is wrapped round the hook by rotating its handle, and then withdrawn; if fragile, the pupil is simply opened. This operation is also applicable to cases of closed pupil, where masses of exudation have collected behind the iris, the needle offering a fixed point from which traction can be made with comparative safety.

[This operation created much interest. It was twice successfully performed by Dr. Agnew in the presence of the leading members of the Society.]

Prof. von GRAEFE exhibited a reading glass for the use of amblyopic patients. It consists of two convex glasses set in a short cylinder, and unites the double advantage of a large field and slight spherical aberration. Also a binocular "measurer of refraction;" resembling an opera glass, and similar to the monocular instrument of his already in use. The great advantage gained by using both eyes at the same time in the determination of the far-point is readily imaginable.

Dr. LURIEJO, of Lisbon, read a paper on tobacco-amaurosis.

The session was closed by a brief address from Prof. Arlt, who adjourned the Society for two years, and invited the members to be present at the third International Ophthalmological Congress, to take place on August 27th, 1866, in Vienna.

An informal, social gathering in the evening was numerously attended by members and their wives. And it would be unjust to close this brief and very incomplete abstract of the two sessions without acknowledging the very remarkable courtesy and kindness with which the Americans present were received by their European brethren. To Dr. Roeder, of Heidelberg, special acknowledgments are most justly due.

Yours, HASKET DERBY.

DR. C. E. BROWN-SEQUARD.—We regret to learn that the Medical Faculty of Harvard University have received, by the last steamer, a letter from this gentleman, announcing his inability to deliver, at the Medical College, during the coming winter, the course of lectures which he had contemplated. In the letter alluded to, Dr. Brown-Séquard states that after packing his furniture and engaging his passage for this country, he was attacked by a return of symptoms under which he had previously labored, and that he is in consequence compelled to desist for the time and in a great measure from active mental labor. While we regret this loss to the Faculty and to the cause of education, we venture to express a hope that the illness of Dr. Brown-Séquard may not be of long duration, and that at no remote period both the College and the public may be able to avail themselves of his valuable experience and distinguished scientific services.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, SEPTEMBER 30th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	49	45	94
Ave. mortality of corresponding weeks for ten years, 1853—1863	49.5	43.1	92.6
Average corrected to increased population - - - - -	00	00	101.09
Death of persons above 90 - - - - - - - - -			

DEATHS IN BOSTON for the week ending Saturday noon, September 30th, 94. Males, 49—Females 45. Abscess, 1—anæmia, 2—apoplexy, 2—congestion of the brain, 1—disease of the brain, 2—cancer, 3—cholera infantum, 11—consumption, 13—convulsions, 1—diarrhœa, 5—dropsy of the brain, 1—dysentery, 7—erysipelas, 1—typhoid fever, 7—typhus fever, 1—disease of the heart, 2—infantile disease, 3—intemperance, 2—disease of the kidneys, 1—lead disease, 1—congestion of the lungs, 1—marasmus, 4—old age, 1—paralysis, 1—peritonitis, 2—pleurisy, 1—premature birth, 2—prostatitis, 1—puerperal disease, 1—suicide, 1—syphilis, 1—teething, 2—unknown, 8—whooping cough, 1.

Under 5 years of age, 42—between 5 and 20 years, 8—between 20 and 40 years, 18—between 40 and 60 years, 13—above 60 years, 13. Born in the United States, 63—Ireland, 23—other places, 8.

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CASES OF OVARIOTOMY.

REPORTED BY G. L. COLLINS, M.D., OF PROVIDENCE, R. I.

[Read before the Rhode Island Medical Society, at the Semi-annual Meeting, Dec. 31st, 1864, and communicated for the Boston Medical and Surgical Journal.]

THE following cases of ovariotomy, with all of which I have been more or less associated, are reported by permission of the operating surgeon, Dr. Walter Burnham, of Lowell, Mass. They are the first and only cases in this State, so far as I know, in which the operation has been performed.

CASE I.—The first case was in the person of Mrs. W., aged 26 years, residing at No. 12 East St. The operation was performed on the 25th of March, 1862, at which date my connection with the case commenced. I was asked to assist at the operation and to take charge of the patient afterwards, which I did. Three physicians, whose names I do not now remember, accompanied Dr. Burnham from Lowell, and also assisted at the operation.

The lady was four years married—had not been pregnant. Menstruation commenced at about the age of 13, and was regular until the 17th year, when the periods began to be interrupted at times, and finally stopped entirely six months previous to the operation. The tumor commenced on the left side, five years before the removal, and one year before marriage. Its appearance was sudden, with considerable pain. The growth was irregular—sometimes rapid, and again slow. The general health had been good, but was much undermined by the disease. Emaciation was great, and the strength much exhausted. The abdomen was very large.

The patient was put under the influence of chloroform. The abdomen was opened from the pubis to the umbilicus. A large quantity of gelatinous fluid surrounded the tumor, distending the abdomen. The tumor was multilocular, some of the cysts containing several quarts of fluid; the whole mass was of the capacity of ten or twelve quarts. The tumor was pretty extensively adherent to the broad ligament. Five ligatures were used on the pedicle and the parts adjacent. They were all brought out at the lower point of

the incision, which was closed by stitches and adhesive straps. The after-treatment consisted of perfect quiet, low diet, with a little morphine occasionally for a few days. She did well for the first week, when some febrile symptoms intervened, with a tendency to chill, which condition continued until about the end of the third week, when a copious discharge of pus took place, per vaginam, and all the unpleasant symptoms soon disappeared. The discharge of matter soon ceased, and she continued to do well. The first ligature came off at the end of three weeks, and the last at the end of eight weeks. She gradually regained her strength, and was able to ride out at the end of three months. Soon after, she left the city for a country residence, where she spent some time, coming back much improved in strength and flesh. Menstruation returned about three months after the operation, and has been perfectly regular since. She is now in good health.

Case II.—The subject of this case was Mrs. C., residing at No. 108 Transit St. She was 48 years of age. Menstruation commenced about the 14th year. She was married at 26. She has had but one child, which was born seven years after marriage. From the birth of this child her menstruation was regular until three years ago, when it was interrupted for three months, after which it was irregular for a year and a half, when it stopped and did not again appear. She has always enjoyed fair health, though never strong.

I was called to see her on the 18th of July last. She had discovered enlargement of the abdomen since March, previous to which time—for nearly six months—she had felt pains and discomfort about the pelvic organs, particularly in sitting. On examination, I discovered the existence of ovarian tumors. They increased very rapidly from this time, with great pain, so that by the end of August she was as large as a woman at full term. Knowing of the previous successful case of Mrs. W., she was desirous of obtaining the advice of Dr. Burnham, who accordingly saw her about the first of September. After having the risks of the operation fully explained to her, she was desirous of taking the chance, rather than continue in the condition in which she then was.

The operation was accordingly performed on the 7th of September, in the presence of eight or ten medical gentlemen of this city, several of them assisting. Chloroform was used. The incision extended nearly from the umbilicus to the pubis. The case proved to be one of *double* ovarian dropsy, of the multilocular variety, and very favorable for the operation. No adhesions existed. But one ligature was used to each pedicle. They were brought out at the lower part of the wound, which was united and dressed as in the preceding case. Some vomiting occurred after the operation, as is not unusual. The subsequent treatment was simply rest, a little morphine for a few days, and injections to relieve the bowels. The urine passed without difficulty. No unpleasant symptoms occurred.

The wound healed by first intention. The pulse did not rise to 100 at any time. One of the ligatures came off on the twenty-eighth day, and the other on the sixty-fourth. She was able to walk about the room after the sixth week, and walked out of doors during the eleventh week. She is now quite well, but is still gaining in flesh and strength.

Case III.—I class this case with those of ovariotomy, though differing entirely in its characteristics. The operation should more properly be called one of metrosteresis. Though the ovaries were both removed, they were not the seat of the disease. The uterus was the only organ affected, and the removal of this constituted the operation.

This patient—Mrs. C., of Richmond St.—was 45 years of age. She was married at the age of 23, and has been a widow nine years. Menstruation commenced at the age of 17, and has always been regular up to the time of the operation. She had never been pregnant. The general health had always been good. The tumor had been gradually developing for twelve years, giving her at times much pain and a great deal of inconvenience; so that she had fully resolved, several years before, to have it removed, let the hazard be what it might. She had applied, unsuccessfully, to several surgeons for its removal, and finally embraced the opportunity of Dr. Burnham's visit to this city, to apply to him. The tumor was uniformly round, or oval, lying in the centre of the abdomen, some eight inches in diameter, and evidently fibróid in its nature. It was clearly made out to be uterine, and the hazard of its removal was fully appreciated and clearly set before her. Her resolution did not, in the least, falter. When told that her chance for recovery was not better than one out of ten, she did not hesitate a moment to accept the chance, whatever it was. She was thoroughly bent on its removal, if she could get any one to undertake it; seeming, notwithstanding the discouraging view presented, to have a perfect faith that, some how, she was to escape. After a consultation with three medical gentlemen of this city, the question of operation was left for Dr. Burnham to decide for himself, with the assurance that, should he determine to operate, he should have our assistance. After considerable hesitation, he decided to give her the chances of an operation.

The operation was accordingly performed on the 9th of September. Nine or ten of the medical gentlemen of this city were present. Dr. N. Miller acted as the principal assistant in this case, and it has since been under his charge. Chloroform was used. The incision extended from the pubis to about two inches above the umbilicus. The tumor was found, as was supposed, to be uterine, and it was necessary to remove the whole of that organ, together with the ovaries and Fallopian tubes. It was liberally supplied with blood, and the separation had to be made with the greatest caution. The *ecra-*

seur was used to some extent, but most of the points where hæmorrhage was feared were secured by surrounding them with ligatures. Eight were used, the last of which was placed directly around the upper part of the vagina, when the final separation of the mass was made by cutting directly through the cervix of the womb, just above the point where the vagina is attached. The ligatures were all brought out, the wound dressed, and the patient treated as in the former cases. The tumor appeared to be a simple hypertrophy of the womb, affecting mostly the anterior portion. It would weigh, I should judge, from eight to ten pounds.

As I have only seen this patient occasionally during her convalescence, I can give but an imperfect account of her progress. It was necessary to use the catheter for some days. The febrile action was considerable. Diarrhœa occurred after some days, which occasioned much anxiety, and seemed to threaten an unfavorable result. The first ligature came away in three weeks. At the present writing—twelve weeks after the operation—three still remain.* She is now about the house, has a good appetite, and has just ridden out for the first time. Everything promises a favorable termination.

Case IV.—This young lady, Miss B., 18 years of age, resided near Warren. She was a patient of Dr. Clarke, of Warren, who, with myself, were the only physicians present with Dr. Burnham at the operation. She had been a girl of delicate health. Menstruation had ceased for several months. The tumor had existed for about one year. It commenced upon the right side, and had been gradually enlarging. She had suffered a good deal from distension, and had been twice tapped—the first time about three months before the operation for removal, when about ten pounds of water were drawn off. The last time was but two weeks previous, when but a small quantity of bloody serum was evacuated. On the day of the operation she was found very pale, with but little appetite, her general health much broken, and a pulse small, weak and frequent. The tumor, surrounded by some water, filled the abdomen, appeared lobed, and gave an indistinct feeling of fluctuation. It was decided to attempt its removal, which was accordingly effected on the afternoon of Nov. 21st. Chloroform was used from preference, as in the other cases. A short incision was first made, just below the umbilicus, and carried through the wall of the abdomen, when a pint or more of bloody fluid was evacuated. On carrying the finger into the wound, a cavity was felt, bounded on all sides by fungous masses, giving the impression of a tumor adherent to the abdominal wall at all points. On detaching some portions of the soft masses, it was decided, at once, to be encephaloid disease, and the operation was about to be abandoned, when, on extending the incision a little farther towards the pubis, to give a more free exit

* These ligatures did not come away until about the last of March, 1865, nearly seven months after the operation.

to the fluid in the cavity, it was found that the first incision had only penetrated a sac in the tumor, situated at a point where adhesion had taken place, and that the examination had been confined to this instead of the exterior of the tumor. The exterior of the mass was now explored, when its removal was found practicable and determined upon. The incision was extended upwards and downwards, and the tumor brought out. It was adherent at three points, requiring ligatures, besides the pedicle, upon which two were placed. She lost rather more blood than usual in these operations.

The wound was dressed, as in the other cases, and she was placed in bed in as comfortable condition as they were after the operation. The tumor was the right ovary, and on examination it was found to be a solid mass of encephaloid disease, weighing nine pounds. It was lobulated, and had the appearance of having been originally a multilocular tumor. The microscope confirmed the correctness of the diagnosis as to the nature of the disease. Of course, recovery from the operation, under such circumstances, was hardly to be thought of. She, however, had a rather comfortable night, slept some, passed water several times, and when I saw her on the following day, at noon, her situation was not more unfavorable than was expected. Her countenance was very pale, and the pulse weaker and more frequent than before the operation. Later in the day she began to sink, and finally died at eleven o'clock in the evening, about thirty-two hours after the operation.

I have simply given hasty and very brief notes of these four cases, as I thought some record of them worthy of being preserved, particularly as they were pioneer cases in our State of this branch of surgery. I shall make but one or two remarks concerning them. The first two cases were well suited to the operation, and both did well. I think that in all such cases, where the disease is ovarian dropsy, whether the tumor is unilocular or multilocular, surgeons should not hesitate to perform the operation for extirpation. It is the only treatment that is certain to cure the disease, and without a cure life is scarcely desirable, however it may be prolonged. It is now well established that it is not more dangerous than most of the capital operations in surgery; and it is certain that it is not nearly as difficult to perform. I trust, therefore, that the day is not far distant when it will take its place as one of the established and legitimate operations of surgery.

In the third case the operation, though successful, is not one to be recommended. The risks are too great to be incurred in such a disease. I believe that out of a large number of similar cases, it would be found that the average life would not be prolonged, but rather shortened by the operation.

In the fourth case, if the nature of the disease could have been known, the operation would not have been undertaken. From the

history of the case, and the physical examination, there was every reason to expect a benign disease. Of course, from the character of the tumor, life could not have been much prolonged if the removal had not been attempted. Life was, however, probably shortened by the operation. The history of the case may serve as a guide to others under like circumstances.

Since writing the above, I have received a letter from Dr. Burnham, in which he informs me that he has operated seventy-nine times in all, for the removal of these tumors, most of them the encysted form of disease. He says, "I have declined, for a number of years, to operate on fibrous tumors, except in the case of Mrs. C. But, in my first operations, I attempted to remove these, but generally gave them up, after exploring the parts, as too dangerous to complete. I have, however, removed eight or ten, and all but two have been unsuccessful; yet three others have done well for the first week, and then have sunk and died, suddenly, without inflammation. The others have died from the effects of general shock to the nervous system.

"Most of the fatal cases which have occurred from the operation on encysted tumors, have been the result of inflammation, where there were extensive adhesions to the peritoneum and intestines. More than eighty per cent. of the operations, in this class of tumors, have been successful. In the fibrous class I have saved two out of ten cases, giving a success of only twenty per cent. I cannot now recommend the removal of fibrous enlargements of the uterus, and all the cases I have seen involve the uterus in their growth."

SURGICAL CASES, FROM THE RECORDS OF THE CITY HOSPITAL, BOSTON.

Reported by David W. Cheever, M.D., one of the Visiting Surgeons.

[Communicated for the Boston Medical and Surgical Journal.]

Third Paper.—Two Cases of Ligature of the Lingual Artery.

Case I.—*Ligature of the Lingual Artery for Disease of the Tongue; Removal with the Ecraseur; Death.*—(Under the care of Dr. Cheever.) Daniel K., æt. 30, noticed, nine weeks ago, that his throat became sore; one week later, observed a small raised spot on back of tongue; it has been constantly increasing since. Cancer not hereditary in family. No known cause of disease. Now in a wretched constitutional condition; pulse feeble; breath offensive; much pain in swallowing; a flat, elongated swelling on back of tongue, about two inches square. No appearance of induration of glands or of throat. Is desirous of an operation before the tumor gets larger.

July 13th, 1864.—On examination, it was found that the tumor had largely increased in size within a week. The patient being etherized, a strong silk suture was passed through the tip of the

tongue and that organ drawn out of the mouth. The tumor now appeared to have an abrupt, well-defined margin. Before attempting its removal, it was thought prudent to tie the lingual artery on the affected side, both to diminish the chance of hæmorrhage, and to possibly delay the recurrence of the morbid growth. A semi-lunar incision, with the convexity downwards, was made from just below the angle of the jaw down to the level of the hyoid bone, and thence upwards towards the symphysis. The flap being dissected up and the sub-maxillary gland displaced, the artery was found and secured beneath the hyo-glossus muscle, and just above the greater cornu of the os hyoides. The spasmodic movements of the larynx impeded the operation somewhat. This wound was now closed by sutures. Next, the cheek was slit up from the commissure of the lips to the edge of the masseter muscle, and, the flaps being held open, the disease was well exposed. Three large curved needles were now passed beneath the tumor, and, after some difficulty, the ecraseur was slipped over them, and the included mass slowly removed. The section was quite soft, and there was no bleeding. The sides and base of the section presented a whitish, cheesy look, like encepholoid, and it was found impossible to make the needles or ecraseur hold fast enough in it to effect any further removal. It was also found that the disease had extended deep beneath the tongue, although of this there had been no previous manifestation. Under the microscope, the tumor exhibited many encephaloid cells, and no epithelial ones.

The patient survived about three weeks, when he sank and died from constitutional irritation and exhaustion.

Case II.—*Ligature of the Lingual Artery for Wound of Tongue; Recovery.*—(Under the care of Dr. Cheever.)—Roger S., 8 years of age, was found by the roadside in South Boston, prostrate and bleeding from the mouth, about 10, P.M., April 15th, 1865. Being unable to speak, he could give no account of the accident, but was faint from profuse hæmorrhage from a wound of the tongue. For two hours ineffectual attempts were made to check the hæmorrhage, when he was brought to the hospital. At 1, A.M., I saw him, and on removing a large clot from the mouth, the wound was found to be a lacerated one, entirely through the tongue, and pretty well back on its left base. Bleeding continued freely. All attempts having been hitherto directed to check the hæmorrhage in the wound itself, it was judged that enough had been tried within the mouth. It was therefore determined to tie the lingual artery. After the administration of stimulants, ether being inadmissible, a curved incision, two inches long, was made over the left cornu of the hyoid bone. The artery was secured in the supra-hyoid triangle in the usual way. Next day there was a slight oozing of bloody serum from the mouth, but no free bleeding as before. In the afternoon, a little more serum, and the pulse had risen to 140. He was directed iced milk for nourishment, and cracked ice, if he desired it.

On the 17th, he was progressing well. No more bleeding.

On the 25th, the ligature had come way, and both the external wound and that of the tongue were healing well. No hæmorrhage since operation.

May 4th.—Three weeks after injury, he was discharged, well.

In these two cases of ligature of the lingual artery, a vessel which is rather seldom tied, it has not seemed to me that the difficulty arose from its anatomical position or relations. Its boundaries and "*points de ralliement*" are precise, clear and near together. The triangle "*sus-hyoidienne*," whose boundaries are the hypoglossal nerve, and the two tendons of the digastric muscle, is as neatly defined as one could wish. The delay or difficulty arises rather from these two other causes:—

1st, Because the injury, for which this artery has to be tied, occurs about the interior of the mouth and fauces, where etherization is not advisable.

2d, On account of the spasmodic action of the larynx in respiration, which, carrying the hyoid bone up and down with it, causes the same trouble in fixing the points of incision that we have in tracheotomy.

Yet, even with these drawbacks, the vessel may be safely reached with care and patience; and the consequences and subsequent risks of its ligature are so slight compared with larger vessels, that it seems unreasonable in surgical authors to stigmatize its ligature as a species of dissecting-room gymnastics, and to prefer tying the carotid for a hæmorrhage which the lingual may control.

We believe, moreover, that much of the delay from the movements of the larynx may be obviated by holding down the tendon of the digastricus with a hook, after it is exposed by the primary incision, and the raising of the submaxillary gland, as recommended by M. Guérin.

A WOUND OF THE SCLEROTIC, CLOSED BY SUTURES—FAVORABLE RESULT.

[Communicated for the Boston Medical and Surgical Journal.]

John S. N., aged 21 years, a soda-water manufacturer, was struck on the eye by fragments of a soda-bottle, which had burst, inflicting a wound of the sclerotic at the margin of the cornea, about four lines in length, causing a prolapsus of iris (and perhaps of choroid), an unsightly coloboma resulting. I easily succeeded in reducing the prolapsus, although it remained but momentarily. Two sutures were then passed through the conjunctiva, near the margin of the wound, and gradually tightened as the prolapsus was reduced; they failed, however, in reducing the whole, so a suture was placed between the two already in. The sclerotic aspect of the wound afforded a suffi-

ciency of conjunctiva, but not so with the corneal, so the suture was passed through a portion of the sclerotic at its corneal junction, which closed the wound satisfactorily. The after-treatment consisted in the application of ice to the eye, atropine and leeches. In fifty hours the lateral sutures were removed, when the wound was found to be well adhered. On the next day, effort was made to remove the central suture, but as the wound showed signs of gaping if much interfered with, it was not removed until the following day, when the wound was found to be well united.

There was a little conjunctival injection, which disappeared in a few days. Patient sees as well, or nearly so, as with the other eye, which is normal.

O. D. POMEROY, M.D.

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SINGULAR TUMOR IN A COW'S BLADDER.

[Communicated for the Boston Medical and Surgical Journal.]

A NEIGHBOR of mine relates the following remarkable freak of nature in one of the lower animals. One of his cows, he noticed, had been gradually losing her milk, and wasting away in flesh and strength for six or eight weeks. Her main difficulty seemed to be inability to urinate. She would place herself in position to accomplish that object, but only a drizzling of urine would come away, after long-continued straining. At length she became too weak to rise, and to end her misery he killed her. Anxious to know more of the cause of her suffering and emaciation, he examined the body after death, but found no important organ of the system diseased till he came to the bladder, which was greatly distended with urine. On opening it, he discovered a tumor, of nearly the size of the double fist, firmly attached to the walls of the bladder upon one side, covering an attaching space of nearly two inches in diameter, near the orifice of the urethra. That portion of the tumor facing inwards upon the bladder had the appearance of a full-blown rose in color and shape, and one of the petals, more pendulous than the rest, was turned partly over the urinary passage, shutting down upon it, probably, in each attempt to urinate, thus giving rise to the drizzling of the urine and to its almost complete retention. This surface was also nodulated, and some portions of it had the appearance of commencing suppuration. Upon cutting into the tumor, it was found to be hard and tough. The appearance of the urine was not particularly noticed.

Was this a cancerous growth? We read of polypous, fungous, steatomatous, erectile and other morbid growths in the human bladder. Occasionally, we find scirrhus and cancer in that organ. Which of these was it? Why may not the same diseases, in a more aggra-

vated form if possible—the same tumors, much larger in their dimensions—affect also the similar organ in the lower animals? In both, they are equally incurable. Death, sooner or later, will be the result. L. C. Butler.

Essex, Vt., October, 1865.

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

Aug. 14th.—*Horse-railroad Accident; Amputation of the Thigh just above the Knee, in a Boy æt.* 13; *Tetanus; Death; Osteo-myelitis; Necrosis.*—Specimen showed and case reported by Dr. Hodges.

The injury affected in no appreciable manner either the soft parts or the bone above the tibia. The amputation (circular) was performed, under ether, at the Massachusetts General Hospital, July 23d, 1865, one hour after the accident, and the patient's condition both before, during, and subsequent to the operation, was as good as could be. The only noticeable incident in its performance was a hæmorrhage from the medulla, profuse, considering the source, and not easily controlled. It was finally arrested, after various means had failed, by a pledget of lint, held in place by a sponge and bandage. The central portion of the stump was consequently left open, though the sutures necessary to bring the flaps together were passed; this was done twelve hours afterwards, the sponge and lint being removed by ligatures attached to them at the time of their application. In all these manipulations the medulla was treated in the gentlest manner, and no styptics were used. Until the 26th there was a little delirium. Aug. 1st, all the ligatures had come away. The union having failed in the central part of the stump, the gaping edges were at this point separated by a globular, fungous growth, protruding from the medullary cavity of the bone, dark-red, firm in texture and smooth of surface, the size of a large crab-apple. By the aid of a director, this was broken off at its pedicle, which was tough, and continuous with the medulla. No hæmorrhage followed. The stump was otherwise in excellent condition, and the patient himself was so well as to be removed from a private room to the general ward. A microscopic examination of the removed mass showed it to be composed of a granular stroma, with some fine fibres, oil globules, and red and white blood-corpuscles, the latter in large numbers.

Aug. 5th, without any special assignable cause, trismus and stiff neck appeared, which, by the 7th, became a general tetanus, continuing until the 10th, when the patient died. Subcutaneous injections of morphine were the essential treatment of the disease, and afforded the greatest relief. The appetite, throughout the sickness, was pretty good, and broth, eggs, bread and milk, soft pudding, and milk-punch were freely taken. A generous diet had been allowed from the time of the operation. The pulse ranged from 120 to 136; the pupils were moderately dilated; the skin was moist and the urine natural up to

the day of death. The mind was unaffected, and the only complaint made was of pain in the throat and the lower part of the back, and of twitching of the stump. In the course of the disease there were several convulsions, and a violent one preceded the patient's death, leaving him in a state of collapse, which was followed by rapid sinking. The beating of the heart for a few hours previous to death was so violent as to suggest the existence of a spasmodic action of that organ.

At the autopsy, all the organs were found to be in a healthy condition. It was thought that, perhaps, the amount of the cerebro-spinal fluid was greater than natural. The spinal cord presented no gross morbid appearances. It was not examined microscopically.

The end of the amputated femur was removed. It was necrosed for four inches above the point of section, and encased in new bone, which had been thrown out to a remarkable extent from the entire surface of the shaft, especially about its extremity. This was easily detached, without revealing any trace of periosteum. The medulla throughout the whole length of the bone removed was of a dark-chocolate color, infiltrated with lymph, rendering it firm and resistant, so that it retained the shape of the medullary cavity, filling it tightly, as if swollen and enlarged. At the end of the bone it bulged out into a flattened button, partially re-producing the fungous growth which had been removed. There was no pus or suppuration at any point. The inflamed and living condition of the medulla was noticeable in connection with the fact that the shaft of the bone surrounding it was dead, and of course had ceased to have any vascular relation with it.

The flaps and the stump were in a perfectly granulating condition and nearly healed. There was no phlebitis, or any appearances at the autopsy suggestive of pyæmia.

The interesting features in this case were—I. The medullary hæmorrhage. II. The late period at which tetanus appeared (thirteen days after the accident), and the preservation of appetite and intellect during the somewhat long duration of the disease (five days). III. The great amount of new bone thrown out from the periosteum; the medullitis, unaccompanied by any symptoms during life, except the fungous outgrowth from the end of the bone, pointing to the local inflammation. IV. The illustration afforded by the necrosis of the femur of the method of formation and cause of the long sequestra frequently removed after amputations performed in the continuity of long bones.

The question may be put, whether the tetanus in the above case was due to the original injury, the operation, or the osteo-myelitis? The latter being a pathological condition of comparative recent investigation, and tetanus a disease of somewhat rare occurrence, their relation, if they have any, has not been determined. It may also be asked whether the inflammation of the medulla was caused by the primary injury, by the hæmorrhage, of which it was the source at the time of the amputation, or by the means used to arrest this. The particular form which the disease assumed in the present instance, is well described in a paper entitled "Remarks on the Pathological Anatomy of Osteo-myelitis, with Cases, by H. Allen, M.D., Assistant Surgeon U. S. A.," in the *American Journal of the Medical Sciences*, January, 1865.

Aug. 28th.—*Malignant Disease of the Bladder.* Dr. Wheeler reported the case.

The patient was a gentleman about 60 years old, very stout, weighing over 300 pounds. For about two months he had noticed that his urine was bloody, though voided without pain. Rest and astringents at first afforded some relief. He then began to have some pain in the glans penis. An examination by the rectum revealed an enlargement in the region of the bladder. The urine contained a suspicious-looking material, which, on microscopic examination by Dr. Shaw, was found to contain unmistakable cancer-cells. The pain gradually extended the whole length of the urethra, and also above the pubes, continuing after micturition. The patient lost flesh rapidly. Incontinence of urine followed, with failure of the appetite, increase of the pain, nausea and vomiting; and death took place about four months from the time Dr. Wheeler first saw the case.

At the autopsy, the bladder seemed to be distended to its utmost, as if containing a semi-fluid, and filled the cavity of the pelvis. The walls were still firm, and upon opening the bladder it was found to contain an enormous fungoid or villous growth, which seemed to spring from the sub-cellular tissue, and was attached to almost the entire mucous cavity. Its structure was delicate and vascular, and it had about the color and consistence of the pulp of a ripe water-melon.

All the other organs were healthy.

Aug. 28th.—*Party-colored Hair.*—Dr. Cheever said that a healthy-looking, florid young woman, 18 or 20 years old, applied at the Dispensary, for some complaint, whose hair was white in patches, one or two inches in breadth, on the right side of her head. The rest of the hair was dark brown. The white hair did not cross the median line, but on the right side the white and dark hair were about equal in amount. The white hairs were stronger and coarser than the others, and resembled horse-hair. There was nothing abnormal in the eyebrows, and the irides were both alike, and blue. The affection was supposed to be congenital.

Aug. 28th.—*Lesion of Accommodation, following excessive Fatigue and Exposure.* Dr. Bethune reported the following case.

A young man, 20 years old, formerly in the army, after a severe march of several days, with short allowance of food, had an eruption (probably eczema) on the lower limbs. A week afterwards he noticed pain in the eyes, and the sight became blurred, after their use. The pain extended to the brows and the bridge of the nose. It was pretty constant, and continued at intervals to the time of consultation. He was ordered evaporating lotions, sinapisms, fresh air, moderate exercise, quinine and the application of leeches. He is now nearly well, but has occasionally some relapses, with a stuffed feeling in the nose. There was probably a low form of inflammation in the nasal and frontal sinuses, with which the lesion of accommodation was sympathetic. Whether with this there was any congestion of the internal tissues of the eye is uncertain, as it was not thought necessary to use the ophthalmoscope.

A new medical school is announced at Cairo, Ill., by Dr. Jos. N. M'Dowell, late of the Missouri Medical College, and Dr. C. W. Dunning, both of whom will be professors in the new school.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, OCTOBER 12, 1865.

American Association for the Promotion of Social Science.—We recently announced that a movement was on foot in this State for an organization designed for the discussion and scientific study of the great questions embraced under the comprehensive title of Social Science. The impulse came from a company of zealous philanthropists in this city, at whose suggestion a circular was issued by the Board of State Charities inviting those persons in the community likely to take an active interest in such an association, to attend a preliminary meeting early in October. This meeting was accordingly held on Wednesday, the 4th inst., and we are much gratified to report that it brought together many active and earnest minds, some of them from distant States, under whose auspices the association promises to become an active agent for the common good of the whole country.

As we remarked, in our former article, no profession as a body can take a greater interest in it than ours. Universally regarded, as it is, as the philanthropic profession *par excellence*, most of the subjects which it proposes to investigate come directly within the scope of its study and consideration. Education—its influence on the mental and physical development of our people—the limits and methods most advisable in its pursuit; the public health; social economy—a most crowded field in its intricate relations and puzzling questions for the most industrious labors of our profession; the relations of employers and employed, considered in reference to the amount of work to be required, the remuneration due for the kind of work, its healthfulness or unhealthfulness, the means of removing the causes of ill health obviously connected with certain employments—all of these, which come directly within the stated objects of this association, call at once upon the members of the medical profession for light and aid. At the first meeting of the association, as will be seen, an important communication was read upon a subject, perhaps the most vital at this moment which can come before it, namely, cholera, by the man of all others in our community most competent to speak wisely and authoritatively on the subject, Dr. Henry G. Clark. We can hardly expect to be spared the visitation of this destroyer, now for the third time approaching our shores. Let it not be said that we heeded not the voice of warning by neglecting to take the sanitary precautions so much needed, and so likely, with the blessing of Providence, to disarm it of so much of its terrors. The first meeting of the association was held in the Representatives' Hall, in the State House, on Wednesday, the 4th inst.

The assembly was called to order at 10 o'clock, by Rev. Dr. Chalmers, who stated the object of the meeting, which he said was to be preliminary in its nature.

His Excellency Governor Andrew was proposed as chairman of the meeting, and was unanimously elected by acclamation.

Frank P. Sanborn, of Concord, and Dr. J. C. White, of Boston, were chosen as secretaries.

Governor Andrew was greeted with applause on taking the chair, and at his request Rev. Dr. Miles asked a blessing upon the deliberations of the assembly.

Governor Andrew then addressed the assembly, thanking them for the honor conferred upon him, and asking a general coöperation in the objects for which they were convened.

Secretary White then read a report of a committee previously appointed, setting forth the objects of the organization which it was intended should be formed. A similar association, it was stated, had existed in Great Britain for several years, and included many of the most eminent philanthropists and statists of that country. The basis recommended comprised four heads, viz. :—1. Education ; 2. Public Health ; 3. Social Economy, Trade and Finance ; 4. Jurisprudence and the Amendment of the Laws. Among other special subjects named was the relation of employer and employées.

On motion of Rev. Mr. Barnard, of Boston, the report was laid upon the table temporarily.

On motion of Dr. Jarvis, of Dorchester, it was voted to proceed in the organization of an association on the basis of the report.

Secretary Sanborn then read a report of a committee, submitting a draft of a constitution.

The first section gave to the society the name of "The Association for Social Science."

Section 2 declared its object to be to aid in the development of social science, and to guide the public mind to the best practical means of promoting the amendment of laws, the advancement of education, the prevention and repression of crime, the reformation of criminals, the adoption of sanitary regulations, and the diffusion of sound principles on questions of economy, trade and finance, giving special attention to pauperism and the topics relating thereto.

Section 3 provided that the association should include four departments, viz. : Education ; Health ; Economy, Trade and Finance ; Jurisprudence and the Amendment of Laws.

Section 4 provided for a president, five vice presidents, a recording secretary, a treasurer, and five directors, together constituting an executive committee—one vice president and one director to be assigned to each department, and with a special secretary for each, to constitute the executive committee for each department, the fifth director to act as librarian ; these seventeen officers to be chosen annually on the second Wednesday of October.

Section 5 provided for holding the annual meeting in Boston, unless some other place should be specially designated ; special meetings to be called at the discretion of the executive committee, at which special meetings no election of officers, laying assessments, or amending the constitution should be in order.

Sections 6 and 7 presented the method of conducting business at meetings of the association.

Section 8 admitted members on the payment of five dollars, and provided for an annual assessment not exceeding that sum ; also gave the privilege of life membership to persons paying fifty dollars.

Section 9 provided for the election of honorary and corresponding members, to be admitted free, and not to exceed in number one fourth of the regular members.

Section 10 provided for the publication of the transactions of the association under the direction of the executive committee and the supervision of the secretaries.

Section 11 confined the privilege of voting to regular members, and prohibited persons not members from taking part in the discussions, except by special vote.

Section 12 promised coöperation with other associations of a similar character, formed in other parts of the country.

The report was accepted, and the constitution was taken up article by article.

Mrs. Caroline H. Dall objected to the title of the proposed association, as not being good English, and on her motion it was changed to "Association for the Promotion of Social Science." After some discussion as to whether it should be a State or national organization, it was voted that the word "American" be prefixed to the title already adopted.

The second section was adopted, with some technical amendments.

Mr. George B. Emerson moved to add "prevention of crime and reformation of offenders" to the objects named in the third section. The motion was opposed by Mrs. Dall of Boston and Hon. Amasa Walker of West Brookfield, who contended that these subjects were already sufficiently embraced in the instrument under consideration. Mr. Walker said that the special province of the association should be scientific, and not reformatory. Dr. Jarvis, of Dorchester, said the committee intended by their language to embrace the idea advocated by Mr. Emerson. That gentleman accordingly withdrew his motion, but it was renewed by Dr. Palmer, of Michigan, and was further discussed by Mrs. Dall, Dr. Jarvis, Dr. Hatch, of Meriden, Conn., Mr. Philbrick, of Boston, Rev. A. B. Muzzey, and Hon. J. A. Goodwin, of Lowell. The gentleman last named thought there was danger of getting too much into the constitution, from a common desire prevailing in such cases, when every man seeks to engraft upon the organic law what he thinks, or what he thinks he thinks, or what he thinks he shall think, fearing that his favorite hobby will be debarred from consideration, unless it is thus specially inserted. Mr. Goodwin said he was in favor of cheap postage, especially cheap ocean postage, and considered this a very important and desirable reform; but he was not going to ask that this subject should be embraced in the constitution of this association, for he had no fear that its discussion would be prevented, if members of the association desired to discuss it. Dr. Palmer withdrew his motion for amendment, and the third section was adopted.

The fifth section was so amended as to give the president and five members of the executive committee power to call special meetings. The sixth, seventh and eighth sections were adopted without amendment. The ninth section was so amended as to enlarge the proportion of honorary members permitted, and only to limit them to a number equal to the number of regular members. The tenth, eleventh and twelfth sections were adopted without amendment.

On motion of Hon. Amasa Walker, the fourth section was so amended as to provide that the officers of the association shall hold their positions until their successors are chosen.

Mr. Wendell Phillips suggested the importance of guarding the as-

sociation against the control by the honorary members of the choice of officers and the levying of assessments.

Col. T. W. Higginson moved to amend the eighth section by reducing the admission fee to $3, and the life-membership fee to $30, and spoke in favor of his motion. Dr. Wellington moved to amend by substituting $1 as the admission fee. This amendment was carried, as was also another amendment, requiring the election of members by the executive board. Both amendments were subsequently reconsidered, however, and full membership was made conditional upon the payment of $3 and signing the constitution.

The constitution was then adopted as a whole. Further discussion arose upon the question of making the association a State or national body, and a motion to reconsider the adoption of the constitution, in order to re-open the subject, was negatived—21 to 27.

The secretaries now proceeded to enrol the names of persons who desired to become members of the association. Nearly one hundred signatures were obtained.

The chair appointed a committee of thirteen to nominate officers.

Governor Andrew now stated that it would be impossible for him to preside at the afternoon session. Hon. Amasa Walker was elected vice president to meet the contingency.

At half past 1 o'clock, the meeting adjourned to 3, P.M.

Afternoon Session.—The meeting came together according to adjournment, the vice president in the chair.

The nominating committee made their report, which was laid on the table temporarily.

Mr. William P. Atkinson, of Cambridge, read a paper on education, discussing the question how the subject could be treated by the association.

The report of the nominating committee was then taken up, and the list recommended unanimously adopted. It is as follows:—

President, Prof. Wm B. Rogers.

Vice Presidents—For Department of Education, Rev. Dr. Thomas Hill; Sanitary Reform, Dr. Samuel G. Howe; Social Economy, Rev. Theodore D. Woolsey, of New York; Jurisprudence, Prof. Francis Lieber, of New York.

Directors—Education, Rev. Erastus O. Haven, of Michigan; Sanitary Reform, Mrs. Samuel Parkman, jr., of Boston; Social Economy, Edward Atkinson, of Boston; Jurisprudence, Hon. Emory Washburn, of Cambridge; Library, Mrs. Caroline H. Dall.

Treasurer, Charles H. Dalton.

Corresponding Secretary, Samuel Eliot.

Recording Secretary, Frank P. Sanborn, of Concord.

Special Secretaries—For Department of Education, Hon. Joseph White, of Massachusetts; Sanitary Reform, Dr. James C. White, of Boston; Social Economy, George Walker; Jurisprudence, Prof. Theodore W. Dwight, of New York.

Dr. Henry G. Clark, of Boston, read an interesting paper on epidemic diseases, especially cholera, which led to a discussion on the sanitary condition of Boston and other cities, in which Dr. Wm. Reed, City Physician of Boston, Otis Clapp and Rev. Mr. Barnard, of Boston, Mrs. Dall, T. C. Amory, jr., and others participated.

Of all other plagues, according to Dr. Clark, cholera has taken the

widest geographical and climatic ranges. It has visited at all seasons all quarters of the globe, and has in the most extraordinary manner overleaped all ordinary bounds. It has spread without regard to quarantine laws or cordons, touching emigrant ships in mid-ocean a thousand miles apart, and landing with them at their ports of destination. Its first visitation to this country was in 1831, when it prevailed to a moderate extent. In the month of September, 1832, the disease disappeared, but revisited us with renewed violence in the winter of 1848 and the summer of 1849. It first manifested itself at Staten Island, on the 2d of December, and nine days later at New Orleans. From these two commercial centres it spread over the whole country. The epidemic was not general till about the first day of May, and had terminated by the last of November, having destroyed in the large towns (which only were reported) thirty thousand persons. An epidemic of very moderate intensity occurred in 1853—about one tenth that of 1849.

The epidemic now prevailing in Europe has spread much more rapidly than has been its wont, while the mortality has been fearful. In Lower Egypt, alone, 80,000 have died. So far only a few sporadic cases have occurred in this country, but its arrival, judging from the past, is only a question of time. To the measures necessary to be adopted if we wish to escape from or to diminish the intensity of the expected attack, there are two parties. First, the various boards of health, their constitutional advisers and their executive officers. Second, the masses of the people, especially those of the laboring classes. The co-operation of both these classes is indispensable. By intelligent combined action all epidemic diseases, especially cholera, can be very much controlled, and their ravages stayed. On the important point of how this is to be accomplished, Dr. Clark made the following important suggestions:—

"Shall we, as some distinguished civilians and others have proposed, establish a rigid quarantine? Shall we exclude all vessels and persons and goods from the Mediterranean from our ports? Shall we obstruct the course of trade in its accustomed channels by land and sea? No—a thousand times, no! If this were possible—if all these and more were possible—how could it avail to arrest the march of a pestilence that walketh in darkness, and that springs out of the earth by intangible but noxious exhalations which are wafted to us without any known agencies, on the wings of the wind, over continents and oceans?

"But above all, when we consider the now established and well-proven fact that cholera is neither contagious nor infectious, how doubly absurd do quarantines appear! Let us therefore dismiss all our fears on this point, relieve ourselves and the authorities from the annoyances and evils incident to a rigorous quarantine, and apply ourselves to the only available but powerful and sufficient remedy to be found in the proper use and application of intelligently directed sanitary measures, and to the energetic administration, by the boards of health, under the advice of their medical officers, of all the provisions of sanitary law. These duties comprise, in a great city, all the departments usually comprised under the titles of external and internal health, and imply attention to the following points, viz.:—1, sanitary survey; 2, general cleaning operations; 3, sewerage; 4, *abat-*

toirs (slaughter houses) and markets; 5, dram shops and drinking houses; 6, lodging houses, cellar habitations, tenement houses, streets and construction of houses, water supply, ventilation, vaccination, public baths, and interment of the dead, and special care in case of the presence of epidemic and contagious diseases.

"The subject of dram shops and drinking houses it may be thought is improperly introduced, but when we all know that, in addition to the pernicious effects of intemperance, the first and most numerous victims to epidemics are the intemperate, it will appear otherwise. Indeed, if, instead of treating and hopelessly attempting to cure and arrest intemperance and dramselling as crimes and civil offences, and amenable only to civil, criminal or moral laws, we should treat the first as a disease and the second as a nuisance, and dangerous to the public health, and to be abated as such, we should, I am sure, have entered upon the right track; for, instead of the prejudices of the people being excited against a sumptuary law, we should, in favor of a sanitary measure, have their entire sympathy and support.

"The duties of the people themselves may be summed up in short to be:—1. To lay aside all unnecessary fears, and to feel that a danger looked full in the face will either be diminished or disappear; 2. To practise personal and household cleanliness; 3. To see that their cellars, drains and other premises are clean and in order; 4. To avoid over-crowding and to attend to ventilation; 5. To avoid intemperance and the habitual use of spirituous drinks; 6. To avoid all decayed vegetables and decayed or unripe fruit."

Dr. Clark remarked that sufficient was known of the laws which govern epidemics to determine beforehand where the cholera will strike and on whose heads it will fall, and the streets, even the houses in our city may be pointed out where it will appear; and he went on to say that if the disease came to this city it would be found in Hanover, Cove and Traverse streets, in Half Moon place, Hamilton place, Orange lane and Quincy court, and scores of similar places, unless the proper authorities and the proprietors of the numerous tenement houses should take warning and thin out the crowded barracks, vacate the reeking cellars, and put their houses and the city in a sanitary condition.

Prof. Rogers, the president elect, having arrived, took the chair, and thanking the association for the honor conferred upon him, which he accepted with unfeigned diffidence, promised to give as much as possible of his coöperation and labors to forward the objects of the association.

Dr. Palmer, of Michigan, stated that the university of that State included the study of sanitary science in its educational course.

Hon. Amasa Walker briefly addressed the association, stating his peculiar ideas upon the subject of national finance.

After considerable discussion upon the propriety of holding another meeting at an early day, it was voted to leave the matter to the executive committee, and at 6 o'clock the association adjourned *sine die*.

No time should be lost by the city authorities in carrying out the sanitary suggestions of Dr. Clark. Notwithstanding the complacency with which we plume ourselves upon the cleanliness of our city, we doubt if Boston was ever in such a dangerous condition, in view

of the approach of this epidemic, as now. Should it come upon us suddenly, we have no right to look for so comparatively light a visitation as the last. For our report of the above meeting we are indebted to the *Daily Advertiser* and *Journal.*

Singular Electrical Phenomena in the Human Body following Lightning Stroke.—M. Boudin recently sent a note to the French Academy of Sciences showing a powerful electric action in the bodies of persons recently struck by lightning, based on two observations which he related.

The first was the case of a man, who, June 30th, 1854, was killed by a stroke of lightning, near the Garden of Plants, at Paris, and whose body remained for some time exposed to a heavy rain. After the storm, two soldiers, wishing to raise the body, received each a violent shock at the moment when they touched it.

In the second case two artillerists, charged with raising two electric telegraph posts which had been thrown down September 8th, 1858, by a storm at Zara, in Dalmatia, having, two hours after the storm was over, taken hold of the telegraph wire, felt at first slight shocks, and then were suddenly thrown down. Both had their hands burnt; one of them, indeed, did not return to consciousness. The other, in attempting to raise himself, fell back again immediately on touching with his elbow one of his comrades, who had been drawn by his cries to his assistance. This last man, also thrown down in his turn, received various injuries of a nervous character, and his arm showed a burn on the skin where he had been touched.

Ovariotomy.—At a recent meeting of the Medico-Chirurgical Society of Edinburgh, Dr. Thomas Keith exhibited four ovarian cysts which he had recently removed by ovariotomy. All the operations were simple and easily performed, and were followed by the rapid recovery of the patients. Dr. Keith had performed ovariotomy 31 times, with the result of 22 recoveries and 9 deaths, or 29 per cent. of deaths.

The School for Feeble-Minded Youth.—The annual meeting of the corporation of the Massachusetts School for Idiotic and Feeble-Minded Youth was held at the institution recently. Previous to the annual meeting of the corporation, the trustees held their quarterly meeting, ex-Governor Washburn presiding. Dr. S. G. Howe, from the trustees, presented the quarterly report, which shows the school to be in a flourishing condition. The number of inmates last reported was 65; 16 have been discharged, and 21 admitted during the past year, making the present number of inmates 71. The treasurer's report shows that the amount expended was $15,159.13; amount paid by pupils for board, $2,519.35; appropriated by State, $12,000.

A committee was appointed to petition the next Legislature to grant such other aid as they may find it advisable for the interests of the institution. The following named gentlemen were appointed as that committee:—Ex-Governor Washburn, Otis Clapp, Stephen M. Weld, Prof. Charles Beck and Francis W. Bird.

The following named officers were elected for the ensuing year:—

President—Dr. S. G. Howe. *Vice President*—Hon. Emory Washburn. *Secretary*—Edward Jarvis. *Treasurer*—Fred. W. G. May. *Trustees*—Francis W. Bird, Samuel Eliot, Samuel G. Howe, Edward Jarvis, Robert B. Storer, Emory Washburn.

The meeting was then dissolved.

Death of Dr. Simeon Snow.—Dr. Simeon Snow died on the 20th ult., in the town of Root, Montgomery County, N. Y., where he had resided for the last forty years—a native of Massachusetts. In early life he settled in that county, and soon attained a high rank in his profession, and always commanded a large and available practice. A man of much experience in his profession, of sound judgment, and of close and scrutinizing observation, pure in character and of incorruptible integrity, he shared the respect and esteem of his fellow citizens. For two years he represented his district in the Senate of New York State with great credit and usefulness, and for many years filled the office of Vice President of the Spraker Bank. Few, if any, of the profession have been more successful in practice or in accumulating wealth.

Died, in Middletown, Ct., suddenly, Sept. 26th, 1865, Prof. Chandler R. Gilman, of the College of Physicians and Surgeons of New York. At a meeting of the Central Medical Association, held at Middletown, Wednesday, Sept. 27th, resolutions of respect to his memory were adopted, and ordered to be published.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, October 7th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	47	44	91
Ave. mortality of corresponding weeks for ten years, 1853—1863	47.1	43.6	90.7
Average corrected to increased population - - - - -	00	00	99.00
Death of persons above 90 - - - - - - - - -			

Epidemic at Maplewood Young Ladies' Institute.—The interesting Report upon this Epidemic, by Drs. Palmer, Ford and Earle, published in late numbers of this Journal, has been re-printed in pamphlet form, and a few copies are on sale at this office. Price 25 cents.

Communications Received.—Spotted Fever, from the year 1810 to 1814.—Letter from Philadelphia.

Books Received.—The Student's Book of Cutaneous Medicine and Diseases of the Skin. By Erasmus Wilson, F.R.S. New York: William Wood & Co.

Married,—In Somerville, Oct. 2, Mark Ranney, M.D., Superintendent of the Insane Asylum, Mount Pleasant, Iowa, to Miss Martha W. Sawyer, of Somerville.

Died,—In Antrim, N. H., August 24th, Dr. Jeremiah Stickney, aged 80 years.

Deaths in Boston for the week ending Saturday noon, October 7th, 91. Males, 47—Females 44. Accident, 1—anæmia, 1—apoplexy, 2—inflammation of the bowels, 3—congestion of the brain, 2—disease of the brain, 3—bronchitis, 1—cerebro-spinal meningitis, 2—cholera infantum, 10—cholera morbus, 1—consumption, 10—convulsions, 1—croup, 2—cystitis, 1—diarrhœa, 8—dropsy, 4—dropsy of the brain, 1—dysentery, 6—erysipelas, 1—scarlet fever, 1—typhoid fever, 7—gangrene of the lungs, 1—disease of the heart, 1—disease of the kidneys, 1—laryngitis, 2—disease of the liver, 1—lockjaw, 1—inflammation of the lungs, 3—marasmus, 2—old age, 2—peritonitis, 1—scrofula, 1—teething, 1—unknown, 4—whooping cough, 2.

Under 5 years of age, 43—between 5 and 20 years, 10—between 20 and 40 years, 21—between 40 and 60 years, 7—above 60 years, 10. Born in the United States, 63—Ireland, 19—other places, 9.

THE

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SURGICAL CASES, FROM THE RECORDS OF THE CITY HOSPITAL, BOSTON.

REPORTED BY DAVID W. CHEEVER, M.D., ONE OF THE VISITING SURGEONS.

[Communicated for the Boston Medical and Surgical Journal.]

Fourth Paper.—THREE CASES OF CUT THROAT.

CASE I.—*Case of Suicide by Cut Throat; Death.*—(Under the care of Dr. Cheever.)—Thos. M., æt. 33, born in Ireland, and a tailor by trade, having been noticed to be wandering in his mind, on Sunday P.M., June 20, 1864, secreted his razor, and retired to bed about 9, P.M. In about fifteen minutes afterwards his wife heard a gurgling noise, and on entering the chamber found that he had cut his throat, and was bleeding profusely. A physician was sent for, who sewed up the external wound, and he was brought to the hospital about one o'clock in the morning.

The skin was cold, the features ghastly, and the pulse almost imperceptible; the clothing was saturated with blood; the respiration was difficult. The stitches were removed and the wound opened, when the cut was found to extend from the middle of the right sterno-mastoid muscle downward and forward through the alæ of the thyroid cartilage, just above the vocal cords, and to the opposite side of the neck, growing less deep as it emerged. The bleeding came from the superior thyroid artery.

When I first saw him, at this time, the glottis was opening and shutting spasmodically in plain view; he was speechless, and the respiration very imperfect. A tube was immediately put into the trachea, through an opening made below the cricoid cartilage, which gave much relief, and through which he threw up a good deal of mucus and blood. It being found that any liquid introduced by the mouth ran out of the cut in the larynx, the tube of a stomach-pump was inserted into the mouth, and with gentle manipulation guided down until it passed into the œsophagus, which was accomplished by keeping it close to the posterior wall of the pharynx. Brandy and water were now thrown into the stomach, and rejected; but, on being repeated, it was retained. Feeble reaction ensued, and in

turn gave way to depression, and in this condition he remained alternating until he died. Brandy and milk were injected every two hours. At 7, A.M., he had rallied so far as to write his wishes, and to hold an interview with his wife. Respiration now easy, but pulse continues poor. He died at 7½, P.M., twenty-two hours after the injury, and death took place from exhaustion rather than apnœa. On examination of the parts *post mortem*, it was found that the larynx was cut through just above the vocal chords, and the pharynx also opened. The carotids were uncut, and no other parts of importance injured.

In reviewing this case, it appears, first, that the suicide was one of unusual determination and severity. A cut which would sever the thyroid cartilages must have been given with very considerable force.

Second, it illustrates the impolicy of closing the external lips of wounds of the throat which communicate with the air-passages, particularly when the vessels divided are not secured. This patient sank for two reasons—loss of blood, and the bleeding taking place into the larynx and trachea. Exhaustion from hæmorrhage and dyspnœa from the occlusion of the glottis by spasm from bleeding and clots, gave an unfavorable termination to an injury not necessarily fatal.

Case II.—*Cut Throat; Retention of Silver Sutures; Recovery.*—(Under the care of Dr. Stedman.)—July 5, 1864. Sarah C., æt. 46, in a fit of melancholy, to which she is subject, cut her throat. Three incisions were made: one, a superficial one, below the middle of the throat; the other two opened the trachea—the first just below the thyroid cartilage; the second, four rings below. Externally, a ragged hole, as with a dull knife, four inches long; œsophagus intact. No arterial hæmorrhage. Two silver sutures and one silk one were put in the lower wound of the trachea; one silver one in the upper wound. Patient evidently insane.

6th.—Much as yesterday. Ate some gruel. Wounds looking well.

8th.—More rational. Speaks without much trouble; a good deal of cough.

9th.—Improving. Slight oozing of pus and sanies from wound; some coughed up. No bleeding.

10th.—Wound kept moist. But little hoarseness; less cough.

13th.—Air whistles through external wound; vocalizes with difficulty; coughs a good deal.

14th.—Silk sutures removed. Wound healing rapidly, except a small ragged opening at one end.

15th.—Coughed up a wire suture.

20th.—Two stitches were removed from smaller wound.

25th.—Air puffs up under the skin from the small wound.

27th.—Edges of sinus cicatrized; it is small and healthy.

31st.—Three weeks and a half since attempt at suicide; discharged well. Two silver wire sutures still in; wounds closed over them. Cough gone. Voice clear.

Nearly a year later, this patient experienced a very severe burn, of nearly the whole body. She was brought to the hospital, and died in a few hours. On examination *post mortem*, the trachea was found well united, and the mucous membrane sound. The silver sutures were still in their places, having been worn a year without inconvenience.

Case III.—*Cut Throat severing right Pneumogastric Nerve; Subsequent Ligature of Carotid; Secondary Hæmorrhage; Pyæmia; Death.*—(Under the care of Dr. Buckingham.)—March 10, 1865. Hannah D., æt. 39, while sitting in her chair, was attacked by her husband, who came behind her with a razor, and cut her throat, from behind the right ear, obliquely downwards across the neck to the second ring of the trachea and a little beyond. When brought to the hospital, her clothes were saturated with blood, pulse weak, features ghastly, extremities cold. A deep, clean-cut wound extends from the anterior border of the right trapezius muscle to beyond the second ring of the trachea, dividing the sterno-mastoid and sterno-hyoid muscles, the external and the internal jugular vein, exposing, but not cutting, the common carotid artery at its bifurcation, and severing completely the right pneumogastric nerve; exposing also the outer belly of the digastric muscle, and cutting in two the submaxillary gland. No arterial hæmorrhage; bleeding freely from internal jugular, which was tied. The wound was cleaned, and brought together by sutures. Stimulants ordered.

March 11th.—Pulse 84. Very comfortable.

12th.—Suppuration begun. Sutures taken out.

13th.—Tongue, yellow, moist coat; pulse 100, and small; respiration 16—expiration longer than inspiration, with an asthmatic wheeze; erythematous blush around wound; no union, save at upper end.

14th.—Pulse 92; respiration 19, nothing peculiar; sloughing of whole interior of wound; constant oozing from divided submaxillary gland.

15th.—Pulse 84; respiration 16.

16th, 8, A.M.—Hæmorrhage came on, florid and free. Wound opened. Point of bleeding not visible. Checked by ice. At 10, A.M., it was decided, on consultation, in view of the fact that the carotid lay exposed in the bottom of a sloughy wound, dribbled over by saliva, and was liable to give way at an unexpected moment, that the most prudent course was to tie the common carotid, below the omo-hyoid, and to do this by a separate incision, in order that the wound might be kept free from the sloughy discharge. The artery was secured a little above the clavicle by Dr. Buckingham, the

infiltration of all the tissues, and the severing of the sterno-mastoid, complicating the operation. Both wounds soon ran together.

17th.—Pulse 108; respiration 24; mouth and tongue a little drawn to right side; sonorous râles in both lungs. Urine and fæces normal.

18th.—Respiration 24; pulse 124; large, offensive discharge from wound; mouth more drawn. Ordered tinct. ferri muriatis.

19th.—Respiration 24; pulse 124; considerable dulness over upper part of right back, with sonorous râles; no bronchial respiration; wound looks and smells badly; slight paralysis of tongue. Continue supporting treatment.

20th.—Respiration 24; pulse 120; upper two thirds of right back dull on percussion; bronchial respiration and bronchophony marked. Thinks herself well.

22d.—Pulse 86; more air entering lung.

24th.—Wound looks better. Upper part granulating; lower part sloughy.

25th.—Ligature on jugular came away.

29th.—Ligature on carotid came away on the thirteenth day. Wound doing well.

30th.—(Fourteenth day after ligature) faint recurrent pulsation in right temporal artery. Saliva continues to flow from wound; paralysis less.

April 10th.—Wound, and general condition of patient, good until this morning, when she had a severe chill. Considerable arterial hæmorrhage from wound. It is now three weeks since the ligature of the carotid, and one month since the injury.

11th.—Nausea and vomiting yesterday; about midnight another chill, followed, as before, by vomiting and hæmorrhage. Nearly eight ounces lost before house-surgeon could reach her. There seemed to be several points of bleeding; easily controlled by pressure. Quiet this morning; pulse 100, feeble; granulations pale, with dirty looking pus; tongue dry.

12th.—Vomiting, but no more chills or hæmorrhage. P.M.—Pain in right eye; strabismus; mind wandering; paralysis increasing. Complains of rheumatic pains in knees. Pulse 80, intermittent.

13th.—At 9, A.M., another attack of bleeding; no chill; bleeding checked by ice and pressure; paralysis of left arm; nothing remarkable in lungs.

14th.—At 4.30, A.M., bleeding, without chill or vomiting; checked with difficulty by ice and perchloride of iron. Blood welled up freely from several points in the midst of a mass of flabby granulations, where forceps or ligature would not hold. Pulse nearly gone at wrist.

15th.—Three slight hæmorrhages in last twenty-four hours; could only be checked by styptics and cold—other measures tried in vain.

16th.—Repetition of chills and oozing.

18th.—Died at 8, A.M., after further chills and hæmorrhages—six weeks after injury.

19th.—*Autopsy.*—Œdema of both lungs, more marked on left; both lungs somewhat adherent to chest; no other changes in lungs. Liver enlarged and fatty. Kidneys pale and fatty. Heart loaded with fat; muscular substance friable. Pretty firm clots in proximal ends of both external and internal carotid. An abscess, as large as a walnut, on upper part of right hemisphere of brain.

This case presents many points of interest. The first is, as to how far the open and foul state of the original wound may have been kept up by the flow of saliva through it, from the divided submaxillary gland; and whether it would not be good practice, should a parallel case occur, to remove the gland wholly, before closing up the wound.

Next, as to the source of the secondary hæmorrhage after ligature of the carotid. Recurrent pulsation was detected in the temporal artery fourteen days after tying the main trunk, and it was not until ten days later that hæmorrhage supervened. More than this, at the autopsy, pretty firm clots were found in the proximal ends of both external and internal carotid. There can be little doubt, therefore, that the hæmorrhage was recurrent, from reëstablished circulation; and it occurred in a spongy, sloughing tissue where no forceps could be made to hold, and no ligature could have been of avail. Could anything else have been done to check it besides cold, pressure and styptics, which were freely used? The only other expedient must have been ligature of the other carotid. But when we reflect that facial paralysis already existed, and the patient had already undergone section of the pneumogastric, we should hesitate long before diminishing still further the imperfect circulation of the brain.

The results following the section of the pneumogastric were trivial when compared with those recorded by physiologists from their experiments on the lower animals. But we must bear in mind that these experimenters divided *both* pneumogastric nerves, while in our patient *the right only* had been severed. It was divided below the point where the superior laryngeal is given off, but, of course, cut off all action of the recurrent laryngeal. Now the more important consequences of the division of both, as recorded by Dr. Dalton, are, 1st, A wheezing and difficult inspiration produced through the recurrent laryngeals by paralysis of the larynx and falling together of the vocal cords. 2d, A diminished frequency of the movements of respiration, followed by passive engorgement of the lungs. 3d, Digestion is interfered with, and food accumulates in the œsophagus, owing to its paralysis, and is regurgitated. Death takes place from failure of the respiration, which grows gradually slower and slower. After death, the lungs are found solidified, but not like ordinary in-

flammatory hepatization. They are shrunken, leathery and non-crepitant, of a purple color, and sink in water. In short, they present the appearances of passive congestion, continued for a considerable length of time.

In our patient, evidences of these changes were carefully looked for. The respiration was noted and the lungs examined daily, by Dr. Buckingham. No paralysis of the larynx or œsophagus occurred. There was no marked diminution of the respiration. But there were evidences of passive congestion of the lung on the injured side, and not on the other. Three days after the injury, the pulse was 100 and the respiration 16. Expiration was longer than inspiration, with an asthmatic wheeze. Six days later, the respiration was 24 and the pulse 124. There was considerable dulness over upper part of right back. The next day, respiration 24, pulse 120. Upper two thirds of right back dull on percussion; bronchial respiration and bronchophony marked. Two days later, these symptoms were passing off, and the air entered the lung more freely. This obstruction was so entirely temporary that after death both lungs were found alike œdematous and adherent to chest, but no other changes existed.

The chills and vomiting and recurrent hæmorrhages, day after day, which finally carried her off, present every symptom of pyæmia. Pains in the joints were also complained of; and although no dépôts of pus were found *post mortem*, except the small abscess in the right cerebral hemisphere already noted, we think this one more probably due to lack of arterial blood from the carotid ligature than to pyæmia:

1st. Because paralysis ensued the next day after the ligature and was never recovered from, while the symptoms of pyæmia did not occur until three weeks afterwards.

2d. Because the softening of the cerebral substance and subsequent formation of pus occurred in the upper and anterior part of the right hemisphere, in just that portion directly supplied with blood by the carotid, through the anterior and middle cerebral arteries, and not in the posterior lobe, or at the base of the brain, which derive their supply through the posterior cerebrals, cerebellar and other branches of the basilar, and thence through the vertebral and subclavian arteries.

ERRORS IN DIAGNOSIS.

[Communicated for the Boston Medical and Surgical Journal.]

At the opening of Fall term of the Albany Medical College, Prof. Alden March, the veteran surgeon of that institution, than whom it is believed there are few living surgeons who have performed more surgical operations, devoted a considerable portion of his introductory lecture to the subject of "Errors in Diagnosis." As some

of them may prove of value to the profession, and be the means of preventing repetitions of similar blunders, I furnish them to your readers, as taken down at the time. Prof. March said:—

"A good many years ago, I commenced to make a brief record of cases under the head of 'Errors in Diagnosis.' The subject has been brought afresh to my mind by recently receiving from the publishers a volume which is entitled 'Outlines of Surgical Diagnosis, by George H. B. Macleod, M.D., &c., of Glasgow,' which, by the way, is a work of great value and especially useful to young practitioners. With a view to satisfy you of the necessity and importance of correct diagnosis, I shall here present a few out of the great number of cases that have fallen under my observation in the course of many years experience. To avoid all chance of wounding the feelings of any one, names will be omitted.

"Many years since, Dr. ——, of ——, made an effort to reduce what he took to be a *scrotal hernia* in a small child, which turned out to be a case of hydrocele that was cured by discutient lotions.

"The same physician (September, 1848) mistook a portion of protruding placenta from the mouth of the womb for *eversion of the uterus*, and made vigorous efforts to reduce it! Strange to say, this physician had been in extensive obstetrical practice for more than thirty years.

"In a case of scirrhus of the pyloric orifice of the stomach, and scirrhous enlargement of the lymphatic glands around it, a tumor was formed over the aorta, the pulsations of which could be strongly felt through the morbid growth and the abdominal wall. The case was called aneurism of the abdominal aorta. The *post-mortem* pathological specimen is preserved in our museum.

"During the year 1830, Dr. ——, of ——, mistook the enlargement of a cervical gland, situated over the carotid artery of a nervous female (who ultimately died of *fungus hæmatodes*), for aneurism of that vessel.

"Mr. P. fell upon his shoulder and dislocated the scapular extremity of the clavicle, which was treated for *five weeks* by Dr. —— for fracture of the clavicle. In a subsequent consultation, two of the most prominent surgeons near the residence of the patient, diagnosticated the case as fracture of the acromion process of the scapula!

"In June, 1847, I saw a female at S——, who had been treated for some time by Dr. —— for disease of the liver. After making a thorough examination, I pronounced the disease to be scirrhus or cancer of the pyloric orifice of the stomach. When death ensued, a *post-mortem* examination confirmed my diagnosis.

"Some ten or fifteen years ago, I was requested to visit a female, who resided about thirty miles from this city, and who had been treated for enlargement of the spleen. Such was the diagnosis of the attending family physician, confirmed by a consulting physician. My first inquiries were in reference to intermittent fever—whether

it was a fever and ague district—habits of the patient, mode of living, cachectic diathesis, &c., but I could learn nothing that would lead me to conclude there was any adequate cause for enlargement of the spleen. By the simple process of percussion over the part supposed to be an enlarged spleen, I readily satisfied the parties that there was a 'wind swelling'—a distension of a portion of the transverse colon with *air*, instead of a solid, or a soft solid, such as would be represented by an enlarged spleen.

"September, 1848, Mr. ——, of ——, was attacked, after a severe day's work in felling trees, in the month of March previous, with great pain in the right shoulder, attended with high fever and lameness. In two or three days the pain and lameness left the shoulder and attacked the left hip, when Dr. —— was sent for, and after examining the case, called it *sciatica*. After intense suffering for a long time the pain subsided, and the patient rose from his bed with a distorted and projecting hip, which was called a *dislocation* by Dr. ——, who made five unsuccessful attempts to reduce it with Jarvis's surgical adjuster. The limb was *apparently* two inches shorter than the other, and yet by accurate measurement no appreciable difference could be detected. The case was neither sciatica, nor a dislocation, but simply a violent attack of rheumatic hip disease, followed by great distortion and anchylosis of the joint.

"Some years ago, a young man came to me, with a sickly, cachectic look and a large swelling occupying the groin and upper part of the thigh, which had been called an *aneurism*, and for relief of which a physician (I will not dignify him with the name of surgeon) proposed to *ligate the external iliac artery!* My diagnosis was 'psoas abscess,' and on puncturing the swelling with a trochar, I drew off nearly two quarts of thick, cream-colored pus.

"The same doctor, at a later period, sent for me to visit a patient of his in the country, with the request to bring a truss for the treatment of a case of reducible inguinal hernia. On examining the case, it proved to be a lumbar abscess, and the truss was not deemed necessary."

With these and many other instances brought before the minds of his pupils, Prof. M. enforced the importance of a thorough education of all the senses in the sometimes difficult task of ascertaining the disease that afflicts the patient, and pointed out the importance of complete knowledge of the part in a state of health, in order that variations from the healthy standard may be detected and diagnosticated.

I may here add, as a matter of interest to many of your patrons who recognize the Albany Medical College as their *Alma Mater*, that the present term has opened under favorable circumstances. The college buildings have been thoroughly repaired and refitted, the attendance of pupils is large, and the several professors enthusiastic in imparting correct medical instruction to those who listen to their

lectures. The clinics thus far have been exceedingly large, and the surgical operations performed before the class numerous and interesting. Some of the more formidable I will undertake to report hereafter. I. D. B.

Albany, N. Y., October, 1865.

SPOTTED FEVER IN RHODE ISLAND, 1810–14.

[Communicated for the Boston Medical and Surgical Journal.]

MESSRS. EDITORS,—What I have lately seen in your JOURNAL, relating to spotted fever, induced me to turn to my note-book of the years 1810 to 1814, inclusive, in which years it prevailed as an epidemic where I then practised, viz., South Kingston, Washington Co., R. I. For four years there was not a single day that I did not visit one or more patients affected with what was so called, although a great majority had no spots, and it might more properly be called *sinking typhus*. I noted 575 cases which fell under my care during its reign as an epidemic; when it became sporadic I ceased to enumerate my cases. The greatest number that I visited in any one day appears to have been 15.

I propose in this communication to notice particularly the treatment.

April 5th, 1810, was called to Mrs. J. B., a tallish, light-complexioned lady, aged, say, 45. For some time previous she had complained of a very sore mouth, which at this time was better. This morning she was attacked with severe vomiting, after getting up and going into her kitchen closet; and at the same time was seized with pain in the left side, just back of her breast, accompanied by a chilly fit. I found her with pretty severe pain in the part above mentioned, attended with vomiting, which brought up a worm. The family as well as the patient expected that I would bleed her, supposing it to be an attack of pleurisy. I found her pulse, however, extremely weak and unresisting, her countenance pale, and I determined neither to bleed nor vomit, nor to give anything cathartic except ol. ricini. I also recollected that I had recently bled in a case somewhat resembling this, and had lost my patient, although I took blood but once, and but very little. I accordingly gave Mrs. B. two grains of opium, with oil of peppermint; the pain abated, and she got to sleep. I ordered an epispastic to the affected side, as also a repetition of the opium in case the pain returned. Left a mixture of camphorated tincture of opium, and spts. nitre dulc.

At night I was called again; the vomiting had recommenced, and she had brought up one or more worms. Opiates and spirits applied to the pit of the stomach checked the vomiting, and I put her upon wine.

The second day of her illness, I found her pulse weak; her tongue

whitish; the pain not considerable in her side; but she complained of some pain in the head, and sometimes the pain was in the abdomen; in fact it was a flying, shifting, unseated pain.

The next day, being the third of the disease, I went early in the morning to visit her again. I was met by Mr. B. at the door of his house, who informed me that his wife had just had a very ill turn; that her pulse stopped; that she became cold, and that he did not know but she was dying. This ill turn was one of the features of the disease—the *sinking typhus*—so termed by my particular friend, the late Dr. Miner, of Middletown. I found, upon inquiry, that wine had not been given to the amount which I had directed. I was informed that she had vomited once since I saw her the day before; and that two black spots had been observed in what she ejected. Her daughter thought them to be clots of blood, but the patient herself thought they were darker, and too black for blood. I directed the doses of wine to be increased; and, in addition, prescribed the wild indigo, with rad. serpentariæ Virgin. Blistered her neck and right side, as the pain had sometimes shifted to these parts of the system. Her skin was moist, most of the time; feet cool; tongue whitish and foul, with a thick fur. Mrs. B. took three grains of opium at night, and rested comfortably.

Next day my skilful friend, Dr. Peter Turner, met me in consultation; he approved of my practice and agreed to its continuance.

On the succeeding day, being the fifth, she seemed better; the fur began to start from her tongue, which looked very red when it came off. Her pulse had been irregular, but was now regular. Continue the wine, with ether, spts. lavend. comp., and other former remedies. Although she was in some symptoms rather better to-day, she had two alarming new ones—hiccough and thrush. For hiccough I prescribed honey, taken very liberally, which I have found better than musk or any other remedy for this symptom. Bark and wine for aphthæ.

Next day, being the sixth, I added spigelia to her decoction of serpentaria, by the advice of Dr. Turner, as a remedy for worms. A few days after, she voided nineteen worms—the common round kind—at one dejection. From this time she convalesced slowly, and had finally a complete recovery.

Spotted fever has in some sections of our country been termed the *winter epidemic;* but it appears in other localities to be as prevalent in warm seasons as in cold. In my own practice it prevailed with equal severity in the warm as in the cold season; for in the third week of July I was called into a neighborhood, in the town of Exeter, where three children had each died on the third day of the attack. They were treated by their physician for worms, with calomel and other cathartics, but as soon as the physic began to operate they began to die, and expired very soon.

July 15th.—I was this evening called to a case, the fourth in the

same neighborhood with those mentioned above; a child between 3 and 4 years old—all the cases in that vicinity being hitherto children; to a fifth I was called in the same night, and to a sixth the next morning. The two last were taken ill in a house where one lay dead, the patient of another physician. The words of my journal kept at this time, are as follows:—"This complaint was very uncommon; the face swelled, the skin appeared purple, the pulse was quick, the eyes had a vacant stare, subsultus tendinum came on the first day of the attack, evacuations were suppressed." I forbore all evacuations, gave infusion of serpentaria Virginiana, camphorated tincture of opium, bark and wine, and blistered the three to whom I was called; they all recovered.

The next notice of a case is one in which a girl, 15 years of age, passed clotted blood from the bowels. And I ought to have noticed before, that, previous to being called to Mrs. B., I was called to a young man, about seven miles from my residence, whom I found actually dying, when I arrived, with hæmorrhage from the bowels, and he expired soon after I saw him. His brother was seized with the same alarming symptom, but by a liberal use of sach. saturni, combined with opium, it was arrested, and he recovered.

The summer of 1811 was one of the hottest ever known, and the winter of 1812 the very coldest, and yet the disease continued unabated in both these extremes. It was sometimes combined with catarrh in the cold season. As it attacked persons in all kinds of weather, it also seized those of all ages and habits. Among others, the Hon. James Burrill, of Providence, a model of temperance and excellence, who, as State's Attorney, was attending Court in South Kingston, and was seized in the Court House. He went to his inn, and sent for me. [The town of Burrillville was named in honor of him. He died a senator of Congress, of consumption, at Washington, D. C.] In the course of his illness, his wife came from Providence, 30 miles distant, to see him, and brought with her their family physician, the venerable Dr. Levi Wheaton. Mr. B. was somewhat better when they arrived, and I invited the Doctor to visit a girl aged 10 years with me, a daughter of Judge Clark, whose children to the number of ten all had this disease during its prevalence. This girl was very ill indeed; she was so weak that it was with difficulty she put out her tongue, and when the Doctor and myself came out together, he turned to me and said I would lose that patient. I made no reply, but returned presently and told the Judge and his wife to trust to wine alone no longer, but to feed the patient with slings made of West India rum till she was made warm and revived from her deathlike debility. Upon my visit the next day, I was told she had taken a full pint of the article, administered as I had recommended, and that she was better; and I so found her. She rallied, and recovered completely.

The quantity of stimulants required in some cases, to have any

perceptible effect, was enormous, and it never intoxicated at all. Still, such cases were the exceptions, as a great majority did not require this treatment; all, however, required some supporting treatment, and none copious evacuations. An ipecac emetic and castor oil to relieve costiveness, were not found debilitating, but needful and useful. That stimulation was carried too far in some cases, has been often asserted, and without doubt truly, as relates to some practitioners.

The manner of seizure was sometimes sudden, various, anomalous, curious and surprising. In the same year and the same month that I was attending Mrs. B. in Rhode Island, Dr. Hale, of Hartford Co., Conn., was called to see a woman aged about 22 years, who was taken suddenly in the meeting-house, in the time of the forenoon sermon. She was put into a carriage and carried home; she was so sleepy on the way that her husband had much difficulty in preventing her from falling out of the carriage. The debility was so great that the Doctor tells us he dared not make any evacuation. His first prescription was laudanum and essence of peppermint. He saved her, but she convalesced very slowly. On the 20th of May following, he was called in great haste to see the child of this woman. In two hours after his first seeing it, "spots resembling ink spattered on very white cloth, appeared over the face, neck and breast." It died, convulsed, in about eight hours from the attack. Two of my patients were seized with blindness, which was the very first symptom, in a state of perfect health. One, a man aged 67, was attacked a mile from home when walking; their sight never returned.

I have seen it stated in a letter that I never lost a single patient during the prevalence of this epidemic in Rhode Island. This was a great mistake; both those patients struck with blindness died, and it has since occurred to my mind that I was too much afraid of producing debility at that time, so that I omitted to give an emetic to either of them, by which they might possibly have been saved.

Your most obedient, JOSEPH COMSTOCK.

Lebanon, Conn., September, 1865.

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE PROVIDENCE MEDICAL ASSOCIATION. BY W. H. TRAVER, M.D., SECRETARY.

Large Substances swallowed; Perforation of the Œsophagus; Death.—Dr. Collins reported the following case:—

"On the evening of Sept. 7th, 1865, I was requested to visit C. E. R., a farmer, residing in Barrington. I reached his residence about 10, P.M. I found him to be a strong, compact man, 46 years of age, and of uniformly good bodily health. I learned that he had for some

time showed some mental obliquity, and had, at least once, attempted suicide. For three months previous to my visit, he had been in the practice of swallowing small pebbles, and once had attempted one so large as to give him much difficulty in getting it down. When remonstrated with by his wife for this singular practice, he replied, that they were wholesome and good for the blood. On the afternoon of the day previous, under this insane impulse, he swallowed, according to his own statement, three stones of large size, so large that he was compelled to force them down. The instrument used for this purpose was a stick, a portion of which I saw, consisting of a slender branch of a tree, one fourth of an inch in diamter, a little flattened, and the end made square with a knife—the bark left remaining on the sides. He stated that the use of the stick had given him considerable pain, and once, after withdrawing it, he had seen blood upon it. He also stated that it was about sixteen inches long, and that he had thrust it down the whole length. After accomplishing his purpose, he attended to various farm duties, among which were the cultivating of more than an acre of land and milking two or three cows. He ate a hearty supper, soon after which he began to complain of pain in the chest and stomach, and difficulty of breathing. He then informed his family what he had done, expressed sorrow for the act, saying that he was impelled to do it by a power over which he had no control.

"Dr. Clark, of Warren, was called to see him. He administered an active emetic, which produced copious vomiting. In the matter ejected from the stomach was found a bit of wood, two and a half inches long, five eighths of an inch wide and one sixth of an inch thick. After this he appeared easier; and breathed with much less difficulty, though continuing to suffer from pain, and unable to lie down. An active purge was also administered, but nothing passed but the usual contents of the bowels. He was considerably swollen about the neck before being seen by Dr. Clark.

"At my visit I found him sitting in a rocking-chair, breathing with much difficulty, and greatly swollen about the chest, neck and face. There was also much swelling of the soft palate and the parts about the fauces. The swelling was found to be occasioned by the infiltration of air into the cellular tissue. He was able to swallow a little brandy and water, though with much difficulty, apparently experiencing great pain from the effort. The extremities were cold, and the whole surface was bathed with cold perspiration. The pulse was rapid and very feeble. His mind appeared clear, and his voice was such as to enable him to answer all my questions so as to be understood. He complained of pain in the stomach, and in the chest along the track of the œsophagus. He could not lie down. My conclusion was, that in the use of the stick to force down the stone, he had probably produced a rupture of the œsophagus, communicating with the trachea or bronchial tubes, and hence the emphysema.

"His condition was such as did not appear to admit of relief. I only advised the use of stimulants, so far as he was able to take them, and external warmth. About four hours after I had left him, while making an attempt to walk, he fell over upon a bed and expired. Permission for a *post-mortem* examination having been procured, it was made on the evening of the same day on which he died. My engagements not permitting me to attend, the examination was made, at my re-

quest, by my friend Dr. Jones, of this city, assisted by Dr. Clark, of Warren. I am therefore indebted to Dr. Jones for the following notes of the—

"*Autopsy.*—The general external appearance was that of a stout, heavily-built man, about five feet eight inches in height. His face was livid, and, with the neck and chest, emphysematous. Upon opening the body, the heart was found firmly contracted, and containing dark, coagulated blood. The neighboring vessels were fully dilated with blood. The lungs were healthy, inflated and crepitant throughout. In the thoracic cavity of both sides was a pint and a half of fluid. The deep structures within the thorax and near the neck were found to be emphysematous. On removing the pharynx and œsophagus, with the larynx and adjacent parts, a perforation was found through the posterior wall of the pharynx, just at the junction with the œsophagus and opposite the epiglottis. The opening was irregular and ragged, as if made by a pointed piece of wood. After passing through the pharynx, the laceration extended down six or seven inches between the œsophagus and the spine, the track being marked by inflammation and commencing suppuration. At the bottom of this abnormal passage was found about two ounces of pus. Within the œsophagus, about midway, was found the upper half of a corn-cob, measuring two inches and three fourths in length and seven eighths of an inch in diameter. The œsophagus at this point showed considerable inflammation. Within the stomach, which contained about half a pint of chocolate-colored, gelatinous matter, were found two stones and a corn-husk. The larger stone measured two inches and a half in length, one inch in the large diameter, and seven eighths of an inch in the small; its weight was one and three fourths ounces. The smaller stone was more irregular in shape, and measured one inch and a half long, one inch and a quarter in width, and three fourths of an inch in thickness; its weight was one ounce. The husk lay along the great curvature of the stomach, not in the least masticated, and measured, when fully unbent, fourteen inches in length. The mucous surface of the stomach was much congested, particularly near the cardiac orifice. Another stone was found in the upper part of the ascending colon, one and a half inches in the longest diameter, one and a quarter in the shortest, and five eighths in its greatest thickness; its weight was three fourths of an ounce. In the lower part of the descending colon, embedded in fæcal matter, was found the wooden handle used for spinning a humming-top; this was four and a quarter inches long, and a little more than half an inch square at the larger end. Beyond this was about a handful of small gravel-stones.

"In this case death was evidently the result of the injury done to the œsophagus and the adjacent parts by the stick, rather than to the presence of the foreign substances in the alimentary canal. The cob in the œsophagus and the stones in the stomach may have hastened the fatal result, but were not the chief cause. The cob had, unquestionably, been once in the stomach, and had been forced into the position in which it was found by the efforts at vomiting. The facts of his having eaten his supper, and that he had vomited so profusely after swallowing the substances, fully prove this. It is quite probable, therefore, that had he inflicted no injury upon himself, nature would have been competent to rid herself of all these obstructions. The wooden handle

had nearly passed through the whole canal. The smaller stone, though one and a quarter inches in the smallest diameter, had passed the pylorus and the ileo-colic valve, and the other stones would probably have followed; while the cob and the husk, if retained for much time in the stomach, would have been digested to that degree that they too would have passed on. The question arises, what should be the treatment in similar cases, providing no mechanical injury be done to any organ? The case proves, I think, that vomiting is dangerous, and should not be resorted to; cathartics, though perhaps not dangerous, may do harm by liquefying the contents of the bowels and increasing too much the peristaltic action. In a case like the foregoing my course would be, after assuring myself that the œsophagus was free from obstruction, to keep the stomach well supplied with bland food, and trust to the resources of nature for the rest.

Poisonous Effects of a Wasp Sting.—Dr. Brown reported the following case:—

The patient, an American lady, aged 30, the mother of a nursing child of some ten months, was accidentally stung by a wasp on the inside of the index finger of the left hand, near the middle of the first phalanx. The sting was attended with pain and swelling; the former increased in intensity. Soon after, a light red efflorescence appeared on the wrist and arm, and extended over the whole body, attended by numerous urticarious wheals. The nervous irritability became intense, accompanied by chills and chattering of the jaws. The motion was so violent and painful, being accompanied by spasmodic action, or contraction of the jaws, that the fear of trismus was entertained. Some gin, the only stimulant at hand, was given, and the feet were immersed in warm water. The pulse, which had been so much disturbed as not to admit of being counted, became more distinct and natural. The redness and eruption soon began to disappear as rapidly as they came. Dry retching commenced, the chills returned, the extremities became cold, and the pulse scarcely perceptible. An attempt was made to administer aromatic spirits of ammonia, which partially failed on account of the contraction of the jaws. The patient in the mean time became speechless and apparently unconscious. The vapor of strong aqua ammoniæ was applied to the nostrils, and energetic friction to the extremities. In a few minutes the patient rallied so as to swallow a drachm or more of the aromatic spirits of ammonia, which was followed by alternate draughts of brandy and ammonia at short intervals; warmth and full consciousness, with the power of speech, rapidly returned, and at the end of two hours the patient was comparatively comfortable. She continued to improve without further relapse. The following day the hand was swollen and painful—skin shining and elastic. The swollen and painful hand was relieved by the application of aromatic spirits of ammonia and camphorated tincture of soap.—Dr. B. met with a similar case in his practice a few years since.

Dr. Wm. Clendenin, who is announced as Prof. of Military Surgery and Surgical Anatomy in Miami Medical College, Ohio, and who has been engaged in military service for the last four years, has declined the Consulship to St. Petersburg, tendered to him by the President.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, OCTOBER 19, 1865.

THE CHOLERA. PRECAUTIONARY MEASURES BY THE CITY GOVERNMENT. THE CITY PHYSICIAN'S REPORT.—In our last week's JOURNAL we were able to present to our readers the interesting remarks of Dr. Henry G. Clark before the Association for the Promotion of Social Science on the subject of cholera, specially important at the present time in view of the expected invasion of our country by that terrible destroyer, and the numerous neglected nuisances which are still suffered to disgrace our city. As our readers are aware, we have repeatedly of late uttered our word of warning and remonstrance on this subject, but until very recently we have seen no signs of any steps being taken to remedy what was evident to everybody else but our city officials. The most flagrant sources of impurity, such as the existence of open-mouthed drains, the deposit of the contents of street cess-pools as a part of the filling-in of the dock at the foot of Mt. Vernon Street, and the like, were positively denied to exist by City officers who ought to have known the truth of the matter. It would seem that at last the senses of the authorities are slowly awakening to the reality of this state of things. We have before us a report of the City Physician on the Asiatic Cholera, bearing date the 2d inst., in which he reports the existence of these nuisances, which being thus presented in an official form we hope may be speedily corrected. Dr. Reed acknowledges the receipt of the official correspondence of the National and State governments, the latter of which was published in our issue of September 28th. He wisely differs from the position assumed in the despatch which forms a part of the former, that cholera is a contagious disease. As this is the generally received opinion at the present time by the most reliable medical authorities, it would seem that no argument was required in the case; but the experience of the physicians and attendants at the City Cholera Hospital, during the last epidemic, furnishes so apt an illustration of its truth, that he wisely makes use of it to sustain his position.

In considering the all-important subject of the removal of public nuisances, and passing rather lightly over what he calls minor nuisances, such as "overflowing vaults, choked drains and open cess-pools," of which he says "a vast number" remain, and "of which seldom a day passes without complaint," he comes to the great Charles Street nuisance. Little has been done as yet by the City authorities to remove this fruitful source of ill odors and disease from a neighborhood hitherto one of the healthiest in the city, but we hope that Dr. Reed's report may lead to more thorough and serious efforts to get rid of it. In this connection, the City Physician publishes a letter from Dr. Francis Minot, Physician to the Home for Aged Females, on Charles Street, which contains facts of too startling and convincing a nature to be overlooked. We should like to give this letter in full, but must content ourselves with the following extracts:—

"DEAR SIR,—The facts concerning the outbreak of sickness in the

Home for Aged Females, in this city, of which you inquire in your note of September 26, are as follows :—

"The number of inmates in the Home is about ninety, besides the matron and the servants, making a total of about one hundred persons. The inmates are all over sixty years old, and their average age in January last was seventy-three years and four months. They are generally remarkably healthy, considering their advanced age, and there has never before been any epidemic in the Home since its first establishment, more than fifteen years ago. The building, which is admirably adapted to its purpose, and thoroughly ventilated, stands at the foot of Revere Street, its western end reaching to within a few feet of the sea-wall lately built along the 'Commissioner's Line,' bordering upon Charles River." Dr. Minot then goes on to describe the nuisance directly south of this building. The stench from it, he says, "was particularly annoying to the inmates of the Home when the wind blew from the southwest, the prevailing direction in summer. When the tide was low during the hot nights, the windows being open, the effluvia were carried all over the house. Numerous cases of vomiting and diarrhœa occurred early in the season, and the disease soon became an epidemic in the house. Some of the cases terminated in regular dysentery, a few of which were severe, but notwithstanding the age and debility of some of the patients, but one death occurred ; this was in a woman nearly ninety-three years old, but who was previously in good health. Another patient who had dysentery severely was ninety-two years old, and in a state of partial dementia, but she recovered. I cannot state the exact number of cases which occurred during the three summer months, but it was large, as may be seen from the fact that *twenty-seven inmates were taken sick in a single night.* The whole number may have been between fifty and sixty, but many of them were light cases."

Dr. Minot next describes the partial remedy which has been applied to remove the nuisance, and the improved condition of the inmates of the Home, which he thinks in part due to these measures. He goes on :—

"It is a matter of surprise to me that the epidemic was not of a more fatal character, considering the close proximity of the house to this foul pond. The cases were in general easily managed, and although some were severe, only one, as I have stated, was fatal. I attribute this to the fact that the bottom of the pond was exposed but twice in the twenty-four hours by the ebb tide, and when this occurred during the day time, the disgusting smell warned those of the inmates who were in their rooms to shut their windows.

"Frequent complaints have been made during this summer, as well as in former years, by the occupants of houses in Charles Street and other streets in the neighborhood, of the very offensive smell arising from this nuisance, and I have had under my care, and continue to see, daily, numerous cases of vomiting and diarrhœa which could be distinctly traced to this source. They have occurred chiefly during the hot weather, when the tide was low during the night time, and the wind carried the poison into the open windows. The number of cases would doubtless have been much greater but for the fact that a large

number of the citizens of this neighborhood are absent from town during the summer months.

"A visit to the source of this nuisance will convince any one of its dangerous character. The filling is composed of ashes, street sweepings, *the matter taken from the street cess-pools* (which, though chiefly consisting of sand washed down through the street gutters, contains much organic matter), oyster shells, and some vegetable matters, including an immense quantity of refuse straw, derived, I imagine, from the stables in the neighborhood. The smaller pond receives its water from the river, at the point of confluence of the Mount Vernon Street and the Berkeley Street sewers, and the stench of sulphuretted hydrogen arising from it is most disgusting. What will be the effect of this soil upon the health of the occupants of the houses which are to be built upon it, it would not be difficult to estimate.

"I am, dear Sir, very respectfully yours, FRANCIS MINOT, M.D."

The Italics in the above extracts are ours, and they require no further emphasis. Twenty-seven cases of sickness in one night, and cess-pool stuff for making soil to build on! In this connection, we may mention that a very high City official denied the fact of such material being used for filling, although his informant offered to present the evidence of a resident in the neighborhood, who had personally witnessed the emptying of three cart-loads of this semi-liquid substance at this spot, and who was taken ill with a violent attack of vomiting and diarrhœa the very night after, the effects of which continued for several days. The facts contained in the government correspondence above referred to, show that cholera was particularly fatal in districts where there was insufficient drainage. We hope that the lesson and the warning given above may lead to immediate and *thorough* reform.

The remainder of the document before us is taken up with a plan recommended for adoption by the City government, based on the "Sanitary Code for Cities," recommended by the National Quarantine and Sanitary Convention, by which the delay of red tape and the circumlocution office are obviated, and the way is prepared for prompt action in the cases which demand it. As yet, we believe, the City government have not taken final action upon the communication of Dr. Reed, but we believe it will be for the public good if they adopt at once its recommendations and suggestions.

CHITTENDEN COUNTY, VT., MEDICAL SOCIETY.—The annual meeting of this Society was held at Essex Junction, on Tuesday, the 2d inst. The President of the Society, Dr. Benj. Fairchild, of Milton, presided, and delivered the customary annual address. His subject was *Coxalgia*, a disease which his long experience as a physician and surgeon has given him ample opportunities for studying. He illustrated his views of its diagnosis, pathology and treatment by cases from his own note-book. By vote of the Society, the President was invited to present his paper before the State Medical Society at its annual meeting.

Resolutions were offered and adopted inviting the State Society to hold its semi-annual meeting for 1866 at Essex Junction, and directing

the President, or some person whom he shall appoint, to prepare a series of articles for publication in the newspapers of the County, explanatory and illustrative of the "Code of Ethics" recognized by the medical fraternity. The object in view is to enlighten the public mind in regard to the reciprocal duties of patient and physician, and of physicians between themselves; matters the ignorance of which occasions many times wrangling, strife and bitterness, and destroys that generous flow of good feeling which ought always to be exhibited by those who hold so intimate a relation to suffering humanity.

The officers of the Society for the ensuing year are:—*President*, Dr. Benj. Fairchild, of Milton; *Vice Presidents*, Drs. J. W. Miles, of Hinesburg, and H. N. Curtis, of Jericho; *Secretary*, Dr. L. C. Butler, of Essex; *Treasurer*, Dr. C. A. L. Sprague, of Williston; *Executive Committee*, Drs. J. F. Miles, of Hinesburg, A. C. Welch, of Williston, and M. Cole, of Burlington.

The meeting was thinly attended, owing, no doubt, to the fact that the physicians of this vicinity have been unusually pressed with professional business during the last few months. The next meeting is appointed for the first Tuesday of January, 1866, at the same place.

L. C. Butler, *Secretary.*

The report on the Epidemic of Typhoid Fever in Maplewood Female Seminary, recently published in this Journal, while it is a model of thorough and impartial investigation of a question surrounded by difficulties of a personal nature, must be regarded as one of the most patient scientific studies of the relation of such diseases to their causes in medical literature. It must take a permanent place among the authoritative records in the history of local epidemics. A few copies, in pamphlet form, are for sale at this office.

Dr. Charles E. Buckingham has been appointed Adjunct Professor of Theory and Practice of Medicine in the Medical School of Harvard University. Dr. Buckingham is a physician of an eminently practical turn of mind and large professional experience; his appointment is an addition of very positive strength to the Faculty of the College.

Epizoötiæ Precursors of Cholera.—In a great number of cases the approach of cholera has been announced by epizoötiæ; there has been very frequently a coincidence between an attack of cholera and the appearance of some very fatal disease among domestic animals. In India, Russia and Poland, deadly epizoötiæ were noticed among camels, goats, horned beasts, dogs and poultry. Many epizoötiæ were also noted in France during the epidemic of 1832, especially among poultry. Upon the appearance of cholera at Paris, Dr. Carrère observed one at Choisy le Roi, and at Bercy, where 500 hens perished in a few days. Others manifested themselves in May, at Calleville, in the department of Eure; at Montluel, in the department of Ain; at Belleville, in that of Rhône; later in July, at Compiègne, in the department of Oise, and near Brest, in Finistère. M. Clément Désormes communicated to M. Rayer the description of an epizoötia which existed among the carp of the ponds of many of the cantons in the de-

partment of Seine et Oise, from the end of 1831 to the beginning of April, 1832. A fact not less striking, and not less significant with regard to the subject under consideration, is that of the emigration of certain birds upon the approach of this epidemic. The rooks which lived in a steeple in one of the townships of Calvados, fled before the scourge. At Glatz, near Könisburg, in Prussia, the same observation was made upon thousands of rooks and daws, who suddenly abandoned their nests upon its approach. The present epidemic [1848–9] has already furnished similar examples, especially in Russia. At the time when the cholera commenced its ravages, there appeared in the environs of Moscow, an epizoötia among the horned animals ; M. Siewruck mentions also a great mortality among the hens and rabbits. There was, also, to my knowledge, an extraordinary mortality among hens, upon the occasion of an extensive clearing of land in the department of Marne, towards the commencement of last year ; the same occurrence took place in Burgundy, and especially at Dijon ; finally, at Oise, in the department of Calvados, and in those of Maine et Loire, Ille et Vilaine, and of Mayenne, during the months of July, August, September and October, a very severe epizoötia attacked the horned animals, swine and cattle generally.

The above extract, from Tardieu's Treatise on Epidemic Cholera, is specially significant at the present time, when we hear so much of the terrible ravages of the cattle plague on the other side of the Atlantic. By recent accounts we observe that this fatal disease has spread to the sheep, and is very destructive. In Belgium it is also stated that a very fatal disease is carrying off the poultry in great numbers. Apart from the alarming deficiency of animal food threatened by these diseases, they have a terrible importance as forerunners of the most fatal epidemic of modern times.

The translation of Tardieu's treatise, by the late Dr. Samuel L. Bigelow, published in 1849 by Ticknor & Fields, of this city, is a very important and valuable work. A new edition at the present time would be most timely, and would undoubtedly meet with a ready sale.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, OCTOBER 14th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	44	48	92
Ave. mortality of corresponding weeks for ten years, 1853—1863	40.6	41.0	81.6
Average corrected to increased population - - - - -	00	00	89.08
Death of persons above 90 - - - - - - - - -	1		1

MARRIED,—In Great Falls, N. H., Dr. Ezra Pray, U.S.N., to Miss Martha J. Hanson, of Great Falls.

DEATHS IN BOSTON for the week ending Saturday noon, October 14th, 92. Males, 44—Females 48. Accident, 3—asthma, 1—congestion of the brain, 1—cancer, 4—cholera infantum, 7—consumption, 20—convulsions, 7—croup, 1—diarrhœa, 3—diphtheria, 1—dropsy, 1—dropsy of the brain, 2—dysentery, 3—epilepsy, 1—scarlet fever, 2—typhoid fever, 5—flooding, 1—disease of the heart, 3—infantile disease, 1—disease of the kidneys, 1—disease of the liver, 1—congestion of the lungs, 1—inflammation of the lungs, 3—marasmus, 3—old age, 6—paralysis, 3—premature birth, 1—scrofula, 1—teething, 1—tumor, 1—unknown, 2—whooping cough, 1.

Under 5 years of age, 30—between 5 and 20 years, 9—between 20 and 40 years, 18—between 40 and 60 years, 19—above 60 years, 16. Born in the United States, 54—Ireland, 30—other places, 8.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL

VOL. LXXIII. THURSDAY, OCTOBER 26, 1865. No. 13.

SURGICAL CASES, FROM THE RECORDS OF THE CITY HOSPITAL, BOSTON.

REPORTED BY DAVID W. CHEEVER, M.D., ONE OF THE VISITING SURGEONS.

[Communicated for the Boston Medical and Surgical Journal.]

Fifth Paper.—FOUR CASES OF EXTRAVASATION OF URINE AND PERINEAL SECTION.

CASE I.—*Impermeable Stricture; Perineal Section; Recovery.*—(Under the care of Dr. Cheever.)—May 18th, 1865. T. L., æt. 23, had syphilis a year ago, and no treatment; has lost a good part of the glans penis, and for ten months past has been troubled with a stoppage of urine, every few weeks, increasing in frequency and severity. Now, has passed no water for thirty hours; suffers great pain; cannot stand still a moment. Prepuce found adherent to glans penis, and a very contracted meatus. Smallest size elastic catheter got into bladder, but no urine passed. At 9, P.M., I was called to him and tapped him through the rectum. For the next few days the valvular opening in the rectum relieved the over distension and spasm, and some urine passed by the urethra. No instrument could be got into the bladder.

On the 24th, a capillary bougie was got a little way into the urethra. The patient being etherized and put in proper position, an incision an inch and a half long was made in the perinæum, and fortunately soon reached the end of the bougie. The urethra being opened, a large catheter was readily passed into the bladder. A smaller silver catheter was now attempted to be passed upwards, but came out in the glans at the side of the meatus. This was found to be a cartilaginous and rigid false passage, and any further effort was desisted from. A female silver catheter was put into the bladder through the perinæum, and a small elastic one fastened into the upper portion of the urethra. Four days later, a larger bougie could be got through the *vias naturales*. This was followed up day by day until, on June 5th, a No. 5 silver catheter was entered at the meatus, and passed through the entire urethra into the bladder and left in.

His ultimate cure was now only a question of time; but in this case syphilis had reduced him to a very poor state for healing. Constitutional treatment was given, with manifest improvement; but it was nearly four months before the wound in the perinæum closed. The largest silver catheters were meanwhile passed through the urethra, and, on being discharged, he was given an elastic one to pass frequently himself.

Case II.—*Extravasation of Urine, with Extensive Sloughing of Perinæum; Perineal Section; Recovery.*—(Under the care of Dr. Cheever.)—July 24th, 1865. Thos W., æt. 54, has had stricture since he was 18 years of age. Has latterly been in the habit of drawing off his urine himself, with a catheter; has now been unable to introduce it for three days. Efforts have been made by his physician, without avail. No attempt had been made to relieve the bladder except *per vias naturales.* Now, as a consequence of three days retention, the urethra has burst in front of the triangular ligament, and extensive extravasation taken place. Bladder reaches to umbilicus. Perinæum hard, livid and distended to the size of a man's wrist. Scrotum as large as an infant's head; penis much swollen; both scrotum and penis very dark and congested. Prostration and agony very great. Patient having been seen late in the evening, it was thought best to relieve bladder first through the rectum, which was done, and about two quarts of ammoniacal and bloody urine drawn off. A free incision was now made in the perinæum, and it was found so much sloughed that the finger could be swept all round through broken-down tissues, the whole circuit of the pubic arch. A long, free incision was also made in either side of the scrotum, down to the tunica vaginalis. As a consequence of these incisions, three fourths of the swelling disappeared. The patient was stimulated, and given forty drops of laudanum.

July 25th.—Pulse 98, and of fair volume; has taken a good deal of beef-tea. Under ether, perineal section was performed, and after some difficulty, owing to the broken-down condition of the parts, a catheter was got into the bladder, drawing off a pint of bloody urine. A smaller catheter was passed through the penis to the perineal aperture, but could not be depressed enough to enter the bladder, owing to the infiltration and rigidity of the penis. Prepuce and scrotum black and sloughing.

26th.—A pretty comfortable night, but catheter slipped out of place early in morning, since which great suffering. Instrument replaced.

27th.—It has again slipped out. After great trouble, under ether, an S-shaped silver catheter was got into bladder, and fastened.

28th.—More comfortable. Urine clear, and runs freely. Improving.

29th.—He was removed to a patent bed, and a rubber tube attached to the S-shaped silver catheter, so as to protect the bed.

30th.—Sloughs beginning to separate. Urine free, and very ropy. Slept well.

Aug. 5th.—Improving greatly. Sloughs come away. The urethra having been heretofore dilated by smaller instruments day by day, a No. 12 silver catheter was passed through the entire urethra into the bladder, and retained. Bladder to be washed out daily.

12th.—He was going on well. The catheter was cleaned and replaced. Wounds all granulating.

15th.—A general eruption of boils, for which he was given iron.

25th.—About a month since extravasation took place; he is doing extremely well. Wounds filling up. Catheter retained through whole urethra. It is now, apparently, a question only of weeks for his entire recovery; but when brought to the hospital it was a question of a very few hours between life and death—hours which had been wasted in irritating attempts to pass a catheter after extravasation had taken place!

Case III.—*Perineal Abscess; Gradual, and afterwards sudden Dilatation of Urethra; Recovery.*—(Under the care of Dr. Buckingham.)—Jan. 12th, 1865. Patrick B., æt. 37, seventeen years ago fell from a scaffold, striking on the perinæum, which was followed by extravasation of urine. Operated on for perineal section by Mr. Skey, of London. Since then little trouble until a week ago, when he had retention, and has been growing worse since. Three days ago, noticed a swelling in perinæum, which gradually increased when he tried to force his water. Now, tumor as large as a hen's egg; hard, but not painful. House-surgeon being unable to pass catheter, owing to false passages, &c., put him in a warm bath, with an opiate enema, when he was relieved.

Jan. 13th.—Dr. B. passed Nos. 3, 5 and 6 elastic catheters into the bladder.

14th.—The abscess burst spontaneously, with a scanty discharge. No. 6 elastic catheter passed and left in.

By Jan. 17th, a No. 12 elastic was got into bladder, and continued daily until 29th, when he had a febrile attack, and great difficulty in introducing catheter.

Feb. 1st.—A No. 12 silver catheter introduced pretty easily. Perinæum still discharging.

10th.—A No. 8 elastic only could be got in, although catheterism had been continued. A dilator was introduced; this was followed by increase of soreness and perineal trouble.

20th.—But little discharge from perinæum; passes a moderate stream himself.

March 1st.—No discharge from perinæum for three days. Moderate stream of urine.

10th.—Etherized, and dilator used to break down remains of the old stricture, after which a No. 12 sound was passed into the blad-

der. This was followed by some pain. Instrument continuously passed and left in, until 28th, when he could pass a No. 12 catheter himself without difficulty, and the perinæum was quite sound. He was discharged well, with a catheter, and directions to pass it every few days on himself.

Case IV.—*Old Stricture, Perineal Fistula and Abscess of Scrotum; Perineal Section; Great Improvement.*—(Under the care of Dr. Buckingham.)—Feb. 24th, 1865. Albert C., æt. 29, has suffered from stricture for many years. Thirteen months ago had an abscess burst in perinæum; six months later, a second one. Through these openings he has passed the greater part of his urine since, only a few drops coming by the meatus. Ten days ago, had chills, followed by pain and swelling of scrotum. Present condition.—Constitutional state quite feeble. Red, fluctuating swelling on left side of scrotum. Two sinuses in perinæum, to the left of the median line; one in the perinæum itself, the other in the spongy portion of the urethra, higher up. The patient was etherized, and a long incision made in scrotum, letting out a large quantity of fœtid pus. The testicle and coverings protruded through the opening, but were returned and retained by two sutures. Attempts to introduce any instrument into the bladder, either by the meatus or the fistulæ, failed. The fistulæ were laid open into one.

March 1st.—He was etherized, and all attempts to introduce the smallest instrument through the urethra having failed, a long incision was made in the median line of the perinæum, and the urethra sought for, without a guide. Owing to the old and firm infiltration and the false passages, the dissection was a prolonged one, but the urethra was finally reached, and a large-sized catheter put into the bladder. The stricture below the glans penis was then divided, and a catheter passed in at the meatus and out at the perineal section, and fastened to that in the bladder.

2d.—Chills. Pulse 92. Tongue dry. Etherized; catheter taken out, washed and replaced.

6th.—Pulse 96. Tongue still dry. Some improvement. Patient's constitution impaired by repeated attacks of intermittent fever. Bladder washed out. Silver catheter passed through entire length of urethra into bladder. Chills were followed by redness and swelling over left thigh.

12th.—Swelling subsiding. Urine mostly by catheter. Expresses much relief since catheter passed through the whole urethra. Pulse 84. Tongue cleaning. Tonics. Stimulants. Good diet.

23d.—Acute attack of fever and pain in right side.

30th.—Very comfortable. No water by perinæum last night. Catheter still in bladder. Urine, which was loaded with mucus, much improved. Scrotum healed. Perinæum contracting.

April 14th.—After sundry attacks of intermittent and of pleurisy,

the catheter through the urethra caused so much uneasiness that it was obliged to be withdrawn. A female (Sims's) catheter was introduced through the perinæum.

22d.—Prostration; chills; sweats and weakness. Will not allow any instrument to be introduced.

26th.—Evidences of effusion in chest.

May 10th.—No catheter since April 22d. Lower perineal fistula closed by nature. Urine passes by upper fistula in spongy portion. Orifice of urethra closing. Irritable and feeble. Will bear no catheter.

May 25th to June 1st.—An attack of dysentery.

June 6th.—Out of bed, hobbling round. Effusion in chest is being absorbed. Chills and dysentery better. Urine as before, by upper fistula. Will hear to no instrument.

24th.—Has eloped.

It seems probable that he could have been wholly cured, had he had strength and patience to persevere. He was, at any rate, rescued from a position of considerable danger, and made far more comfortable; while nature herself closed the lower fistula, and showed signs of effecting an exit for the urine by the natural passage.

BI-SULPHITE OF SODA AS A REMEDY IN MEASLES AND SPOTTED FEVER.

[Communicated for the Boston Medical and Surgical Journal.]

Post Hospital, Galloupe's Island, October, 1865.

Desiring to convey to the profession my testimony as to the efficacy of bi-sulphite of soda in certain diseases, I will refer to some cases in which it has been exhibited at this hospital. I have used this remedy with success in measles, and in spotted fever with such results as to warrant its further trial. I have known of its being the only drug administered in a case of confluent smallpox, which recovered. At the time I assumed charge of this hospital, February 20th, 1865, the garrison consisted of five companies 13th Regt. V. R. C., about 450 men. There were in addition more than a thousand recruits, the majority of them from Maine, which State at that time being deficient in her quota, sent the most recruits here. The barracks devoted to the recruits were crowded; originally built to accommodate 100 men, during the months of January, February and March they often held 150, and some days 180, and this state of things continued, not with different bodies of men, but with the same lot, because no transport came to take them to the front; either government could not spare the vessels, or they did not need the men. The season was the most inclement of the year, and the recruits, having no duty to call them out, remained in the barracks, day and night, huddled around the stoves, or sleeping on the

boards in their one blanket. Once a day, however, if it was not stormy, they were all taken out at evening dress parade. Though the barracks were thoroughly policed every day, they would soon become dirty again, and at night the air was exceedingly foul. Men would stop the apertures of ventilation on account of the cold. Spotted fever and cerebro-spinal meningitis made their appearance; measles also became epidemic. I distinguish between spotted fever and cerebro-spinal meningitis, as in the former disease there was no soreness or stiffness of the neck, and where there was the stiffness of the neck, and occasionally opisthotonos, I never saw any spots. There were other differences, but that of which I have spoken was the principal one, and sufficient to lead me to make use of the different designations in my official reports. In the barracks occupied by the garrison, not a case of either disease has at any time occurred, nor of measles, and in fact very little sickness of any kind, unless I except the chronic ailments to which men in garrison are subject. I must here state that no blame can attach to the military authorities of the island on account of the crowded condition of the barracks; every possible measure was adopted to lessen the number of men, and to enforce sanitary regulations; in consequence of my representation of the state of affairs in my first monthly report, a Commission was sent on to investigate. The result of their examination was a recommendation to *enlarge the hospital*, already large enough for all ordinary occasions. The Commission could not see the propriety of urging the removal of the recruits, failing to recognize the truth of the old maxim, "an ounce of prevention is worth a pound of cure." In due time the men were mustered out of service, after a brief military career on Galloupe's Island, the war terminating before they reached the tented field.

First, with these favorable, predisposing influences, measles, when it did appear, of course became epidemic. It was confined almost entirely to the Maine recruits, most of whom had not had it in childhood. For nearly two months the average was from three to eight new cases a day, more or less violent, according to the constitution of the patient. Previous to my taking charge of the hospital, the treatment had been rather of the expectant kind, such as a cough pill or mixture, *ter die*, palliatives for the coryza, ophthalmia and other common symptoms. I pursued this course for some time, but soon found that the patients did not recover readily; pneumonia supervened, too often followed by a long and dangerous sickness—deafness and otorrhœa, obstinate and long continued, cough, and persistent debility. My attention happened to be called to the exhibition of bi-sulphite of soda in measles. I immediately commenced its use, with the most gratifying results. The duration of the disease was materially shortened—the average time in hospital being reduced to six or seven days. Not a case occurred in which deafness followed, very few in which pneumonia was a sequela, while

the cases throughout were generally mild, easily managed, and thoroughly recovered. My formula was:—Bi-sulph. sodæ, ʒ i.; ad syrup. simplicis (occasionally syr. scillæ, or aa. p. e.) ʒ i. Of this I gave to a newly-admitted case f ʒ i. every two hours until 9, P.M., when I usually omitted it till morning, perhaps prescribing for the night a pill containing a grain each of opium and ipecac. In a day or two, I reduced the dose to the same quantity twice or thrice a day, according to the progress of the case. The only diet was gruel. Pursuing this course of treatment, I found that I discharged men about as rapidly as I admitted them, that there was always room for one more; but finally six or eight new cases occurring daily, I was obliged to take a barrack for convalescents. From March 1st until May 12th, I had 141 cases of measles; deaths, 9, 6 of them occurring before I commenced the use of the bi-sulphite. Pneumonia was the cause of death in each case.

In the number of this JOURNAL for Sept. 7th, the case reported as XVI., W. L., was one of spotted fever, with no stiffness of neck or cerebral symptoms; admitted on the 6th March. He had the ordinary treatment for measles. On the morning of the 11th the eruption disappeared, but the case had a peculiar aspect which I hardly understood, not suspecting the advent of the fever. At noon, however, I recognized it, and endeavored to save him by stimulants, but he died at 7, P.M. He had no bi-sulphite, as I had not begun to use it. This was a well-marked case of spotted fever, and the fact that he lay upon the bed occupied by Case VIII. had probably not much influence, for the same bed had been used by many men after Case VIII. left it, who did not have the fever. The room was small, and there were in it four other cases of measles, and I presume that the windows were closed on the night of the 9th. I always insisted upon their being raised enough to ventilate the room, but the moment the patients were left alone they would close them—the recruit being only a soldier in embryo, not having learned the value of pure air.

I will now refer to cases of spotted fever. In the number of this JOURNAL for Sept. 7th, Case XI. is selected. This case is peculiarly interesting, because its duration gave the opportunity of witnessing all the phenomena of the disease. Instead of dying, as usual, within forty-eight hours, the patient rallied from the first overwhelming shock of the attack, and presented many interesting symptoms. The "stinging pains in the arms and legs" were common to all of the cases, as soon as the spots began to appear on the extremities. There was almost invariably vomiting, pulse hardly perceptible, intellect clear. Purposing to vary the usual treatment, I prescribed for this patient the following injection:—Spts. frumenti, ʒ iij.; quiniæ sulph., gr. x. This, after being retained a while, brought away a heavy discharge of dark and exceedingly offensive fæcal matter. This injection was repeated again that day, with a similar result, when the

pulse became stronger, though the spots increased and began to coalesce. Egg-punch was given throughout the day. The second day he had evidently rallied, but began to lose the power of sight. I think the blindness was produced by an extravasation behind the retina, similar to that under the skin. The treatment after that was stimulating, viz., carbonate of ammonia, brandy-punch, nourishing diet; afterwards, quinine, then iron, cod-liver oil, and anodynes *pro re natâ*, until March 29th, when I began the exhibition of bi-sulphite of soda. During this time, over a month, the suppurating surface of the fore-arm, and sores on the legs, were dressed daily. The blindness was not removed at all, though at times he could distinguish light; but when he finally left us he was entirely blind. April 2d, very severe soreness of throat set in, attended with much salivation—he took no mercury in any form during his whole sickness; this was treated with ordinary gargles, and in the course of a week or two subsided. Then he had diarrhœa, which yielded in a week or so to appropriate treatment. He continued to take tonics and the bi-sulphite until May 15th, when he was taken home, blind, in a state of considerable emaciation, his arm healed, and his legs slowly improving. I have only heard from him once since, when, in June, he continued to improve, but had not recovered his eyesight. The course of the case throughout was exceedingly slow and tedious, with scarcely any improvement from day to day. His appetite was constantly good, in fact almost ravenous; his spirits were remarkably good. Blind, totally helpless, covered with sores, he would lie on his back and swear with great energy, if the attendants were remiss, would laugh, and divert many a poor sufferer with his jocular remarks; his pluck was wonderful, and perhaps saved his life.

Case XIII., Dr. G. A. P., was also very interesting. The symptoms on admission were as usual; I think there was no stiffness in the neck, but pain in the region of the ear where the abscess occurred. As soon as he was admitted, I commenced the exhibition of bi-sulphite, the spots appearing on the extremities, trunk, on his bald head, and the white of the eye. He took twenty grains every hour from April 11th until the 16th, when I gave him of the solution (ʒ i. ad ʒ i.) one fluidrachm every hour, and so reduced it as the spots disappeared slowly, and he improved. He took no other medicine, unless it was milk-punch *ad libitum*, with generous diet, until May 7th, when I omitted the bi-sulphite, the abscess healing, and improvement general, intellect clear. I then gave him citras ferri et quiniæ, accompanied with porter, until May 15th, when he departed, well. During the first two weeks he had delusions, and was more or less delirious, evincing a remarkable disposition to crawl under his neighbor's bed, where in a state of nudity it delighted him to remain.

Fearing to encroach longer on the patience of your readers, I will refrain from reviewing the remaining cases.

F. LeBarron Monroe,
Post Surgeon, Galloupe's Island.

IMPERFORATE HYMEN.

[Communicated for the Boston Medical and Surgical Journal.]

Messrs. Editors,—I do not communicate the *case* with the expectation of presenting anything new to all of your many readers, although I am aware that there have been many, and that there are some physicians who are sceptical as to the reality of such a condition of any female at the age of puberty. In past times many authors and journalists of medicine have earnestly, and with no small measure of vehemence, discussed the delicate question at length and profoundly. Jurists have differed in their instructions in medico-legal lore; judges have sometimes ruled and charged adversely, and juries have rendered their verdicts from time to time in accordance with the opinion or leaning of the court to this side or that. I offer this simply as a record of what it has been my lot to observe in a case under my notice.

Several years since, I was called in great haste to visit Miss H., who, it was stated, was suffering severely with "colic." "They had fears she would not live"; she was "vomiting badly." Miss H. was in her 17th year, had a light complexion, light hair, blue eyes, nervous temperament, and was quite tall, lean and anæmic; chest flat and narrow; shoulders inclined forward and stooping. I found her in bed, with her lower extremities drawn up, groaning and writhing, occasionally vomiting. Her countenance was ghastly pale. The feet, hands and general surface were cold. The pulse was small, quick, and easily compressed. The tongue was heavily covered with a yellowish-white coat. There was much prostration, and it seemed to me then that collapse was near at hand. The impression made upon my mind at that time is vivid in my memory; it was in my earliest years of practice, and I had seen many cases of cholera, which undoubtedly led me to think of exhaustion and collapse. I found a mustard plaster over the chest, a bag of hops dipped in hot water over the abdomen, and bottles of hot water all around her. Many highly reputed "cure-alls" for vomiting and colic had been given, without any effect but to increase the violence of the symptoms. On removing the hops from the abdomen, I found pressure to increase the pain; and as my hand passed over the pubic region I detected an unnatural fulness. The prominence was firm, somewhat resembling a distended bladder, yet not so yielding to pressure, less elastic, less pyriform and less circumscribed. On inquiry, I learned that the urine had been passed in sufficient quantities, but with severe pain. The bowels were habitually constipated, and evacuations caused great suffering, but they had been moved with salts the day before. She had been subject to these attacks for more than a year, and they had gradually grown worse; "they troubled her every few weeks, but they had always been able to relieve her until the present attack." For the last four months she had been "gradually grow-

ing poor and miserable." She had lost her appetite, and "her mouth tasted bad all the time lately." Her breath "smelt terribly" at times, as it did at this time. She had been sick at the stomach almost every day for several weeks; had a dizzy head, and noises in her ears. Her friends were afraid she had disease of the heart, it would beat so whenever she took much exercise. She could not sleep well on account of frightful dreams, and, of late, night sweats. She had been opposed to consulting a physician, so her friends had treated her with "strengthening and driving" things. They didn't think "she was quite right as a young woman should be." In fact, she had never menstruated. It flashed upon me what the difficulty might be. I communicated my suspicions to the mother, and requested counsel with their family physician, who was absent when they called me. The late Dr. Wm. H. Allen, my old and esteemed preceptor, was accordingly summoned, and came in haste, when the necessary examination was made. A prominence was detected by touch at the vulva; by separating the labia pudendi a smooth surface presented, yielding only slightly to considerable pressure of the finger. The parts were not especially sensitive, except when considerable force was used, when the pain was greatly increased above the os pubis. It was difficult to say what the bulging prominence could be. We could *push* the digital examination no farther—the natural channel was completely blockaded. On ocular examination, the tumor exhibited a smooth, membranous surface, opaque, and looking very much like the tissue of a fresh bladder well blown up. The hymen was pierced at its centre by a lancet, and instantly a dark, grumous liquid, the accumulation undoubtedly for more than a year, exceedingly offensive to the olfactories, was ejected in a stream the size of my little finger, with a force sufficient to besmear the partition of the room, not less than four feet away. A quart of the liquid was removed from the floor, and a pint must have fallen in the bed. The relief of the patient was instantaneous. Restoratives were used, reaction soon appeared, and antiphlogistic measures were directed to relieve local inflammation, while a supporting regimen was adopted to sustain the system. Her recovery was slow, but finally complete.

C. Alexander, M.D.

Malden, Mass., October, 1865.

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

Aug. 28th.—*Calculus passed per Urethram.*—Dr. C. D. Homans showed an oxalate of lime calculus which was remarkable for its large size, it having passed through the urethra of the patient. He was a

man about 40 years old, a waiter, born in England, but who had resided in this neighborhood for fifteen years. He entered the City Hospital in the middle of June, on account of incontinence of urine, which for two months had obliged him constantly to wear a bag. He was treated in the medical ward for a few weeks, but in the beginning of August was transferred to the surgical pavilion, the sound having detected the presence of a calculus in the neighborhood of the prostate gland. It was directed that his bladder should be washed out with cold water every second morning, and that he should take ten grains of carbonate of potash three times a day. The urine soon became alkaline, and the irritability of the bladder somewhat lessened. Aug. 20th, he complained in the evening of much pain in the penis, with a constant desire to pass his water, which only came in drops. Opium was given for the relief of the pain to the extent of four grains during the night. In the morning there was entire retention of urine, and on passing the catheter a calculus was felt at the junction of the first and middle third of the urethra, which was extracted by means of forceps by the House-surgeon, Mr. R. M. Ingalls. There was some hæmorrhage from the penis. From this time the man steadily improved in health, and can now hold his water four or five hours without inconvenience. The calculus weighed twenty (20) grains, and measured in length ten sixteenths, and in breadth seven sixteenths of an inch.

Sept. 11th.—*Glandular Proliferous Cysts of the Breast.*—Specimen shown by Dr. Hodges.

The patient was a married woman, æt. 59, who entered the Massachusetts General Hospital Sept. 8th, 1865. Twenty years ago she was thrown from a horse's back, the pommel of the saddle striking her on the right breast. Five or six years afterwards, her physician told her that a tumor was growing in that locality, although at the time nothing was perceptible externally. Six or eight years ago, it was first noticed by her husband. Within a year its increase had been rapid, and the skin had grown tense, shining and discolored. Three months since, the latter ulcerated at three different points, and its size diminished considerably in consequence. The patient's general health was at all times good, though within a few months there had been some debility and anæmia. The axillary glands were unaffected. At the time of operation (Sept. 6th) the tumor was as large as the patient's head ; was broken by deep furrows into three lobes, and these again were lobulated. Its surface and the surrounding integument were traversed by large veins, but the skin elsewhere than at the point of ulceration was healthy, though thin and vascular ; it was movable on the tumor, which itself was movable on the pectoral muscle. The nipple was retracted. The ulcerations were granulating healthily, and the chief discomfort experienced was from the weight of the tumor.

On examination, the disease was found to have implicated but a small portion of the mammary gland, the larger part remaining in a healthy condition. The entire gland was, however, removed. A section of the tumor displayed the characteristic appearances of the serocystic disease of Brodie ; but owing, probably, to its long duration, the cysts were so filled up with the intra-cystic growth of the hypertrophied gland that their fluid contents had disappeared, and the tu-

mor had thus become solid. The cyst-walls were apparent in various places, and a single cyst filled with fluid was opened during the operation. Two larger cysts, devoid of fluid, showed their proliferous character in a striking manner, permitting their contents to be turned out from the cavity in a large mass of closely packed lobes, varying in size from that of a pea to an English walnut. The diagnosis in this case was confirmed by the microscope. The patient is now ready (Sept. 21st) to leave the hospital, the wound having healed, except in a single spot, where it is rapidly granulating.

Oct. 9th.—Dr. Hodges reported the following cases, and showed the accompanying specimens.

Salivary Calculi.—A patient, 25 years old, entered the Massachusetts General Hospital for a tumor beneath the ramus of the jaw, of twelve years' standing, hard, movable, and from which no inconvenience had been experienced until six months before her admission, when it became painful, enlarged, and easily felt within the mouth at the side of the tongue. It discharged a watery fluid at first, which subsequently became purulent. Every now and then the tumor would enlarge, the discharge cease for a short time, and then break out again, with relief. An incision at the side of the tongue permitted the release of two salivary calculi—one the size of a grain of wheat, the other not larger than a mustard-seed. The incision healed rapidly, and three months after the operation the patient was seen, and found to have been relieved entirely from the periodical attacks of swelling, while the tumor was rapidly disappearing.

Portions of Gutta-Percha Bougies removed from the Urethra.—A man, æt. 45, was operated on in England, 12 years ago, for a stricture, by perineal section, and by the advice of the surgeon had subsequently been in the habit of using gutta-percha bougies of his own manufacture, passing them from time to time through the stricture. Four months ago, he broke off a portion of one of these in the urethra. He paid no attention to the occurrence, but suffered the fragment to remain. Two days before his entrance to the Massachusetts General Hospital, he broke off the end of a second bougie, and then thought it time to secure their removal. This was done by external section, and two fragments, each one and a half inches long, were easily extracted. One of them was coated with phosphatic deposits ; the other was in the condition in which it was introduced. The operation was performed Aug. 16th. On the 27th no urine escaped by the wound, and on the 30th the patient was discharged.

Remarkable Cavity in the Parietal Bone containing an Encysted Tumor.—A young man applied at the Massachusetts General Hospital for the removal of a small wen beneath the scalp, which he said was of three months' standing. Although the patient's diagnosis was probably correct, the flatness and ill-defined boundaries of the tumor, as well as the history given, were not in accordance with the usual characteristics of encysted wens. At the operation, the cyst was found to be almost wholly contained in a bulging cavity, with sharp edges, formed for it in the parietal bone, of more than half an inch in depth. The aperture of this cavity allowed but a small segment of the tumor to project above the surface of the surrounding bone, and it was this portion which alone was felt before the operation. The bottom of the cavity was formed by the internal table of the parietal

bone, so thin as to spring under pressure. The cyst was in all probability a congenital one, and afforded a striking instance, in an unusual locality, of the depression in the parietal bone which sometimes accompanies congenital encysted tumors of the circum-orbital region.

A cast of the cavity from a mould in gutta percha, made at the time of the operation, was shown to the Society.

Compound Dislocation of the Semi-lunar Bone of the Carpus.—A master carpenter jumped about three feet to a staging, one of the boards of which gave way and precipitated him headlong into a cellar eight or ten feet below. Throwing out his hand to save himself, he struck his right wrist among a quantity of loose stones. The result was a compound dislocation of the semi-lunar bone of the carpus, through a transverse wound on the palmar aspect of the wrist, of about two inches in length. The bone lay in the wound, and was retained only by a few shreds of tissue, from which it was easily detached. The cuneiform bone was loosened from its position, and two small fragments of it, broken away, remain attached to the semi-lunar bone by the short connecting ligaments, as the specimen still shows. This bone was easily replaced, and was therefore not removed. Neither radius nor ulna were injured, and, with the exception of the cuneiform bone, no other lesion of the bones existed. None of the tendons were ruptured, and there was neither swelling nor apparent deformity. There was an unnatural mobility of the wrist-joint on manipulation of the fore-arm and hand, and the fingers easily detected the void occasioned by the dislocated bone, especially upon the back of the wrist. The bone was removed by Dr. Hodges, in consultation with Dr. Cutter, of Woburn (in whose practice the case occurred), about four hours after the accident. The arm was put up in a curved splint fitting the back of the fore-arm and hand, and was kept cool by water-dressings at first and subsequently by irrigation from an apparatus extemporized by Dr. Cutter for the purpose. Six days after the accident the arm began to inflame and swell, and on the eighth day free incisions were required on account of extensive inflammation and suppuration of the cellular tissue, extending as high up as the shoulder. The pulse was 120, and there was some delirium. On the ninth day there was temporary improvement, both locally and generally, so that the patient was able to attend to some affairs of business, but his strength gradually failed, and he died on the tenth day after the injury.

The rarity of compound dislocation of a single carpal bone, except as the consequence of gun-shot or machinery wounds (when, in view of the general injury, it becomes an incident of secondary importance), is admitted by all writers. Malgaigne mentions, as a matter of great curiosity, a single observation of dislocation of the semilunar bone, followed by complete recovery of the use of the wrist, and which in its details is almost the exact counterpart of the one above reported. In Holmes's Surgery it is stated that the Museum of St. George's Hospital contains the specimens from a case where the semi-lunar bone was dislocated simultaneously in both wrists. Sir Astley Cooper relates an instance where the scaphoid bone was dislocated by a machinery accident. Dr. H. J. Bigelow has reported an instance of compound dislocation of a single carpal bone to this Society. Erichsen says a simple dislocation of the semilunar bone has been seen by him a single time. All these dislocations, with the exception of Cooper's,

were caused by a fall from a height upon the palm of the extended hand. That it should be the semilunar bone which has been dislocated so many times is singular, and would seem to indicate a greater readiness to dislocate in that bone than in its fellows.

Bifid Uterus and double Vagina.—The subject of this deformity was a patient 57 years old, who died of a cancerous tumor occupying the left iliac region. She had always been healthy until this disease made its appearance. There had been nothing unusual with regard to menstruation, which ceased at the age of 40. She had given birth to three children ; her labors were always severe—the last one unusually so ; this occurred twenty years before her death, and was achieved without instruments. The two previous confinements were protracted, but whether there was any abnormal presentation, or if instrumental aid was required, is not known. Her husband, during the patient's life, was ignorant of the fact that any unnatural condition existed. When pregnant, and whilst lactation was going on, menstruation was always suspended.

At the autopsy, the malformation was revealed for the first time, though there were some reasons for thinking that its existence had been known to the patient herself.

On examining the organ, it was found that there were two vaginæ, about equal in size, the left one perhaps a little the largest, and similar as to walls, rugæ, &c. They extended from just within the vulva to the uterus, and were separated by an interval filled with compact cellular tissue. Close to the uterus the vaginæ communicated with each other through an opening about one fourth of an inch in diameter. From each vagina a probe passed into a separate uterine cavity. The os uteri in each vagina was small and imperfectly developed, as also was its orifice. The organ, as thus composed, was hardly larger than the normal uterus, but, about one and a half inches from the os, it bifurcated into two symmetrical cornua, as large round as the forefinger, and about one and a half inches long ; these terminated in the Fallopian tubes, which, with the ovaries and broad ligament, were natural. There was but one ovary to each cornu. The cornua were covered with peritoneum, except where the two layers of the broad ligament separated, and it also covered what might be called the fundus of the compound portion of the uterus. There was nothing to indicate that one side of the uterus had been impregnated and not the other, unless it was the greater capacity of the left vagina.

For an account of the above remarkable case the Society is indebted to Dr. A. B. Hoyt, late Surgeon 25th Mass. Vols., from whom Dr. Hodges received the details, and in whose behalf they were communicated.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, OCTOBER 26, 1865.

THE HOURS OF LABOR.—The Commission appointed by the Governor to consider this important question has issued a circular letter, asking information on certain points relating to the subject, and appoint-

ing an early day for a public hearing at the State House. A copy of this has been addressed, we believe, to every member of our State Medical Society, but for the benefit of our numerous readers out of Massachusetts we re-publish it, hoping that they may be induced to extend similar inquiries as to the systems of labor which prevail in other parts of the country.

BOSTON, October 9, 1865.

DEAR SIR,—The Commissioners on the Hours of Labor, appointed by the Governor and Council, under the Resolve, Chapter 62, of the General Court for the year 1865, are desirous of collecting information relating to the subject. For this purpose, a hearing will be held at the State House, on Thursday, the 26th of October, at 9 o'clock, A.M., which you are hereby invited to attend. If, however, your convenience will not allow you to be present at that time, will you favor the Commission with information, by letter, in regard to the following points, if within your knowledge.

1. The number of hours daily required of the laborer in the different occupations pursued in your vicinity, with the reason of the difference in hours, if any exists.

2. The employment of children at in-door occupations, and whether they are kept out of school by their parents or employers, in consequence of their work; the rate of wages paid them, as compared with adults, and any other particulars which may occur to you concerning the subject.

3. The occupation and wages of women as compared with those of men; and particularly the wages and condition of that large class of female laborers called needle-women.

4 The *actual* results of overwork in any occupation on the health of mind and body, and the duration of life among laborers.

5. The means in your vicinity for laborers to use profitably the time gained by any reduction in the hours of labor, and whether such a reduction would tend to increase vice and crime.

6. The effect of a reduction on business, on the investment of capitalists, and the price of commodities; and whether it would lead in most cases to special contracts with the laborer, or the custom of working by the piece.

If you can answer any of these questions, and not the whole, it will be regarded as a favor for you to give us information on so many points as you can, or any others relating to this subject, which have not here been stated. For the Commission,

F. B. SANBORN,
HENRY I. BOWDITCH,
WILLIAM P. TILDEN.

As will be seen by the tenor of these questions they are addressed not only to our profession, but to those whose interests are practically affected by them as well as to the so-called theoretical reformer and philanthropist. If reform is needed in this direction, it is to be accomplished in some such way as this, as the result of information derived from all sources and considered in its scientific, economic and moral relations. That it is needed or that it is desired by the laboring classes, no one can doubt who is familiar with the rapid decay of life, or who bears in mind the evil results and frequent occurrence of "strikes" among certain portions of them. Leaving to others the

discussion of the difficult question of the causes of their present condition and the means to correct it, there still remains for our own consideration the equally important inquiry as to the amount of labor compatible with man's healthy and full existence as a working being merely, without reference to the higher matters of his moral and intellectual improvement. For if we can convince the over-exacting employer, whether a powerful and "irresponsible" corporation or a hard-hearted, petty contractor, that the man or woman who is overworked to-day cannot work as well to-morrow, and that the laws of health are the most profitable laws to observe, we shall have successfully used the most influential of all arguments. We trust that the profession will return to the Commission such information as it alone can impart on several of the inquiries bearing upon this point, and that the whole subject will receive from the community the attention which its importance deserves.

Death of Prof. Chandler R. Gilman.—At a meeting of the Trustees of the College of Physicians and Surgeons in the city of New York, held on the 10th inst., the death of Chandler R. Gilman, M.D., Professor of Obstetrics and the Diseases of Women and Children, having been announced, it was—

Resolved, That the Trustees of this College have heard with deep regret of the decease of one of its most eminent professors.

Resolved, That during the long period during which the late Dr. Gilman had taught in this College, the talent, earnestness and zeal with which he has devoted himself to the instruction of its pupils has always secured him their entire respect and admiration; and the uniformly urbane and considerate manner of his association with his class has equally entitled him to their affection and good will.

Resolved, That these resolutions be published in the daily papers, and a copy transmitted to the family of the deceased.

Edward Delafield, M.D.,
President.

Gurdon Buck, M.D., *Registrar.*

At a meeting of the President and Faculty of the College of Physicians and Surgeons of New York, held Oct. 16th, the following preamble and resolutions were unanimously adopted:—

Whereas, it has pleased Almighty God to remove from this world our friend and colleague, Prof. Chandler R. Gilman, while humbly bowing to this dispensation of an All-wise Providence, we, who have shared his toils and witnessed his devotion to the exalted duties of a self-sacrificing profession, may be permitted to give some public expression to the feelings that so sad an event cannot fail to excite:—

Therefore, *Resolved*, That in the death of Dr. Gilman this institution has lost an able, successful and distinguished teacher; its officers an intimate, tried and endeared personal friend; the medical profession a wise and trusted counsellor, and the community a learned and deservedly eminent physician, a profound thinker and a great and good man; That, while from the chair, which for twenty-five years he has adorned, he has eloquently taught the true principles of medical science and has distinguished himself as a leader in scientific progress, he has no less, in his blameless life, honorable character, general sym-

pathies, reverence for truth, respect for the rights of others—in his graceful literary attainments, in his faithfulness and zeal in all professional duties, and in his jealous watchfulness over professional purity and honor, left an example worthy the imitation of the thousands who have listened to his teachings and cherish his principles; That to his bereaved family we tender our heartfelt sympathy, invoking for them Heaven's choicest consolations, and assuring them that we shall ever cherish in our hearts pleasant memories of his life and labors.

J. C. Dalton, M.D., *Secretary of the Faculty.*

Action of the Worcester District Medical Society on the Death of Dr. John Green.—At a meeting of the Worcester District Medical Society, called last evening to testify the respect of the Society to the memory of Dr. Green, Dr. Sargent, president of the society, introduced the business of the meeting with the following remarks:—

"I have considered it my duty, as president of the Worcester District Medical Society, to call a special meeting of the society in commemoration of the death of our venerable and distinguished associate, Dr. John Green. There is no one of us who is not ready to testify respect for his memory.

"Identified with all the early history of the society, Dr. Green had ceased to take an active part in our meetings before most of those now present had entered on the field of action; but all of us are familiar with his reputation, and to many of us he was a valuable counsellor and an esteemed friend. Descended from medical ancestry and early trained to the practice of the profession to which he devoted his whole life, he was eminently a practical man. With a modesty which is worthy of imitation, and which was always characteristic, he was in the habit of speaking of himself as having cultivated the Art of medicine, while some of his colleagues, more favorably situated for study, had cultivated its Science. But all of us recognize that his large experience, his judicious observation and his ready generalization had made his own practice a science by itself. All of us who knew him well can recall illustrations of this fact. He diagnosed the locality and the limits of acute thoracic disease by the vibrations communicated to his fingers, supplying the defect of his hearing by digital auscultation. He first stated the analogy between the spotted fever of the early part of this century and the cerebro-spinal meningitis of the last twenty years. No *post-mortem* examinations within his observation had illustrated the pathology, but his close observation and retentive memory recognized the likeness. Who of us was not struck with his remarkable diagnosis of abscess in the anterior mediastinum by subsidence of pus and extension of inflammation from disease in the mastoid cells—as proved at an autopsy a few years since. He had 'seen a similar case about thirty years ago.' But I will not enlarge upon details whose history would require elaborate medical eulogy.

"Our venerable colleague has departed. His well rounded life has completed its earthly circuit. His work is finished, and the commendation which it receives is the best reward of the good physician.

"I have called the society together that we may testify a proper respect to the memory of our venerable and distinguished colleague."

Further remarks were made by Dr. Workman and by Dr. Clarke, Dr. Workman alluding to the professional history, and Dr. Clarke to the valuable intercourse and ready assistance which all of us had so often had with Dr. Green, and enlarging upon his sagacity, shrewdness and good judgment. After which the following resolutions, introduced by Dr. Workman, were unanimously adopted:—

Resolved, That in the death of Dr. John Green, the Worcester District Medical Society has been deprived of one of its most worthy and distinguished members, an honored ex-president and an early benefactor.

Resolved, That we shall ever cherish a grateful remembrance of him as a kind and generous friend and associate, a patron of true science, an able and good physician, a beneficent citizen and an honest man.

Resolved, That we mourn his departure from us, and tender our sympathies to his relatives and friends in their bereavement.

It was voted that the foregoing resolutions be adopted and entered upon the records of the society, and a copy of the same be communicated to the friends of the deceased.

Asiatic Cholera—Precautionary Measures in Boston.—In the Board of Aldermen, on Monday, 23d inst., the Report of the City Physician on Asiatic Cholera was taken from the table, and the following resolutions and orders in relation to a sanitary visitation, were adopted:—

Resolved, That in view of the necessity of more systematic and energetic measures to remove from our city, as far as possible, those causes and sources of disease which are in constant operation within itself, as well as to place it in a proper state of preparation for the epidemics which occasionally visit it from abroad, it is therefore—

Ordered: 1. That the Chief of Police is hereby directed, under the advice of the City Physician, and in conformity to the accompanying blank forms of return, to cause a thorough and systematic examination of the *whole city*, to be made by the Police Officers in their respective districts, in order that accurate information may be had of its sanitary condition, and the necessary means taken for its improvement.

2. That the Police Officers of the Districts, or those who may be specially detailed as Health Officers for the purpose of executing this order, shall carefully inspect and report to the Chief of Police, in writing, all streets, lanes, courts, passages, common stairs, houses, rooms, cellars, yards, or vacant lots, which require cleansing; and in cases where, from any cause, *frequent cleansing* is required, they should specify the fact.

They shall also report all cases where the drains, cess-pools, or privies are in a state injurious to health. They shall also report any cases of prevailing sickness, especially where there is great overcrowding, or unusual destitution of the necessaries of life.

They will also report all cases of *death* which occur in families living in single rooms or confined apartments, especially when the death has been from any malignant or contagious disease.

3. When any nuisance or other source of disease is discovered, notice, in the proper form, is to be served upon the owners or occupants

forthwith to abate the same, and in case of refusal or neglect for a period of twenty-four hours, the Chief of Police is authorized and directed to cause the same to be abated or removed *in the most summary manner;* and he is hereby authorized to call upon the Superintendents of Health, of Streets, and of Drains, to aid him in such removal.

The expense of such removals or abatements of nuisances (of which an accurate account is to be kept) shall be chargeable to the owners or occupants of the premises.

4. These measures shall be so continuously pursued as to prevent, as far as possible, any re-accumulation of the causes of disease now sought to be removed, and each officer will be considered strictly responsible for the sanitary condition of his assigned district.

5. All persons, acting under and by the authority of this order, are hereby authorized to enter upon and into any premises which it may be necessary to visit in compliance with its provisions; but their object in so doing must be first stated to the occupants, and all unnecessary annoyance to them most carefully avoided.

Means of Averting Death from Chloroform.—Dr. J. Bullar, of Southampton, states that a plan has been successfully practised in the hospital of that place, for reviving those who are sinking from the administration of chloroform. This plan consists in the assistants at the operation striking the patient with the flat hand in the most vigorous and rapid way on all exposed parts of the skin (the trunk, the legs, the arms, and the face), and to continue this until the pulse and breathing return. The mouth is also kept open and the tongue drawn forward.

In one case, which Dr. Bullar briefly notices, he says:—"It is difficult to estimate the time, but certainly from five to ten minutes elapsed before the heart acted, and not until both legs were blue with ecchymoses. Had not the staff of the hospital had faith in this remedy, the case at one time seemed so hopeless that other plans might have been attempted and time lost; but this faith is necessary for perseverance. Every part of the skin should be rapidly exposed, and every one should assist and strike with his flat hand as sharply and rapidly as he can, and continue it.

In this instance the immediate local effect in filling the parts of the skin which were struck and around them with red blood whilst the heart and breathing had ceased, shows that this plan is a stimulus of the reflex nervous function of a very vigorous kind, which can be immediately applied to the cutaneous ends of the nerves over a large surface without any apparatus, and with the greatest ease.

As the sympathetic nerve presides over the capillaries, and over the heart, the excitement of both by this means is readily explained by the direct communications of the ganglia of the sympathetic with the roots of the spinal nerves. According to the doctrine of the correlation of forces, the mechanical force of the hands of the strikers is converted into the nerve-force of the patient, and is conveyed by the sensitive nerves of the skin to the spinal cord, and is reflected from it, through the sympathetic, to the heart and capillaries.—*Amer. Jour. of the Med. Sciences*, from *Med. Times and Gazette.*

Dr. O. M. Langdon, Superintendent of the Longview Lunatic Asylum, in Ohio, has been re-elected by the Trustees for a term of six years. Dr. Byron Stanton, late a surgeon in the Army, has been elected Superintendent of the Northern Ohio Lunatic Asylum.

The Miami Medical College of Cincinnati, as may have been observed by its advertisement in late numbers of this Journal, has fixed a matriculation fee of $15, and makes no charge for Professors' tickets.

Drs. G. B. Bullard, of St. Johnsbury, Vt.; G. A. Torbet, of Cannellton, Ind.; Alexander Cochrane, Westfield, N. Y.; D. W. Maull, Wilmington, Del.; J. C. Cawood, Danbridge, Tenn.; and S. C. Rogers, Toledo, Iowa, have been appointed Pension Examining Surgeons.

Dr. George H. Hubbard, formerly Editor of the *New Hampshire Journal of Medicine*, and late Lieut-Col. and Surg. U. S. Vols., has just received an honorable discharge, and has permanently located himself at Lansinburg, N. Y.

Drs. Wm. B. Casey and T. H. Bishop, who have been engaged as government surgeons at the Knight Hospital, New Haven, Conn., for nearly two years past, have been honorably discharged, and the hospital closed.

Dr. T. C. Brinsmade, of Troy, N. Y., offers a premium of $100 for the best essay on Medical and Vital Statistics, with a plan for Hospital Reports and Records of Private Practice, and a draft of a Registration Law. The essay is to be handed to the Committee of the New York State Medical Society on Prize Essays by the 15th of December next.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, October 21st, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	31	47	78
Ave. mortality of corresponding weeks for ten years, 1853—1863	35.1	36.7	71.8
Average corrected to increased population - - - -	00	00	78.30
Death of persons above 90 - - - - - - - -		1	1

Communications Received.—Address before the Franklin District Medical Society.—Case of Cerebro-spinal Meningitis.

Books Received.—Researches on the Medical Properties and Applications of Nitrous Oxide, Protoxide of Nitrogen or Laughing Gas. By George J. Zeigler, M.D. Philadelphia: J. B. Lippincott & Co.—Materia Medica for the use of Students. By John B. Biddle, M.D. Philadelphia: Lindsay & Blakiston.—Stimulants and Narcotics; their Mutual Relations, with Special Researches on the Action of Alcohol, Ether and Chloroform on the Vital Organism. By Francis E. Anstie, M.D., M.R.C.P. Philadelphia: Lindsay & Blakiston.—The Practice of Medicine and Surgery applied to the Diseases and Accidents incident to Women. By William H. Byford, A.M., M.D. Philadelphia: Lindsay & Blakiston.

Married.—In Woburn, Oct. 18th, Dr. R. Edwin Jameson, late Surgeon 29th Mass. Vols., to Miss Annie R. Ingalls, all of W.

Died.—At East Boston, Oct. 20th, Dr. John Moriarty, for many years Superintendent of the House of Industry, Deer Island, aged 59.

Deaths in Boston for the week ending Saturday noon, October 21st, 78. Males, 31—Females 47. Accident, 4—amenorrhœa, 1—anæmia, 1—aneurism, 1—apoplexy, 1—disease of the brain, 1—inflammation of the brain, 1—cancer, 1—cholera infantum, 4—consumption, 17—convulsions, 2—croup, 2—diarrhœa, 2—diphtheria, 1—dropsy, 1—dropsy of the brain, 2—dysentery, 4—typhoid fever, 3—gangrene, 1—gastritis, 1—disease of the heart, 1—disease of the hip, 1—infantile disease, 3—inflammation of the lungs, 4—marasmus, 1—old age, 5—paralysis, 1—premature birth, 3—puerperal disease, 1—pyæmia, 1—unknown, 6.

Under 5 years of age, 27—between 5 and 20 years, 8—between 20 and 40 years, 20—between 40 and 60 years, 10—above 60 years, 13. Born in the United States, 51—Ireland, 20—other places, 7.

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NECESSITY OF MEDICATION IN DISEASE.*

[An Address delivered before the Franklin District Medical Society, October, 1865, and communicated for the Boston Medical and Surgical Journal.]

BY DAVID RICE, M.D.

GENTLEMEN,—The world is full of new theories. They abound in every department of life. In science, theology, law, and politics, and especially in medicine, all over its broad firmament, they course abroad like a shower of meteors. Truths as old as the world itself are unheeded and trampled upon, that heresy may be paraded and flaunted in our very faces. These new views and problems are not originated by the ignorant and unlearned, but they come from those of whom we well might expect better things. Men of letters, fretted and displeased with solid truth, and with axioms as old as they are trite and true, impertinently dally and play with new-made fantasies, with polished theories and highly-wrought speculations, and parade them in sober earnest for our grave consideration. How much it becomes us, gentlemen, as thinking men, to guard well the gates, like faithful censors, of our own noble calling and profession.

I have been led to these reflections by the perusal of the address read at the last annual meeting of the Massachusetts Medical Society, and written by Benjamin E. Cotting, M.D., of Roxbury. The address is entitled, "Disease; a part of the Plan of Creation." The doctrines of this discourse are several, but principally these:—First, that all, or nearly all diseases come as direct providences of God—"one of the myriad expressions of Divine thought"—

> "And the fruit
> Of that forbidden tree, whose mortal taste
> Brought death into the world and all our woe."

"No forecast or wisdom of the individual can with absolute certainty ward off or delay their attacks." "No 'mortal taste,' but the

* At a meeting of the Franklin District Medical Society, it was voted to request of Dr. Rice, of Leverett, a copy of his address delivered before the Society October 11th, for publication in the Boston Medical and Surgical Journal.

WM. DWIGHT,
Secretary Franklin District Medical Society.

will of the Creator determined and fashioned such a system of diseases." They seize upon the healthy and the frail alike, "confounding all hygienic laws," and often prefer the most healthy and purified places instead of the most polluted. In a word, to give the doctrine a fair translation, sanitary means are just about good for nothing, and the ordinary means of prevention are nearly useless, for God foreordained the whole plan for man and the lower order of animals to bring them to their natural end of existence.

This is the substance of one theory inculcated in the discourse. Another, about as peremptorily urged, is the following: Diseases, most of them, are self-limited. They have their "periods of invasion, incubation, progress, decline and disappearance"—"they are as systematically planned, pre-arranged, and as wonderfully wrought out as the life-history of any existence, vegetable or animal." Diseases, then, are the result of foreordination, proofs of inventive thought on the part of our Creator, planned, executed and finished by His unalterable and inexorable will. The plain inference designed to be drawn is, that all diseases are very little modified by external circumstances, and can be benefited only in a very limited degree by medication.

To sum up the two-fold doctrine of the thesis:—Diseases are foreordained by God; they come and go at His bidding; and medicine, sanitary means, and medical men are *just about good for nothing!* The few remarks I shall make, will be to disprove these somewhat dogmatic and doubtful theories.

Are sanitary means useful in preventing and in modifying diseases? Is medication doing for our patients more harm than good? Can even self-limited diseases, in their proper acceptation, be left with safety to run through their own natural courses? In a word, is the medical profession a blessing, or is it a curse to the world?

First: Can diseases be prevented and rendered more tolerable by sanitary means? It is well known to every careful medical observer and scholar, that the most fearful epidemics that have come under his observation, or that history has recorded, can in most instances be traced to some direct or indirect exciting or predisposing cause, that rendered them more general, tedious and fatal. The ancients paid the most careful attention to hygienic laws. A part of the Jewish religion pertained to cleanliness, purification, and protection from *causes* of diseases. Some excellent statements are found in the report of the "Sanitary Commission of 1856," which being pertinent to my purpose, I take the liberty to transcribe. "Plato and Aristotle taught that no city could long exist without its health officers, and we learn that Demosthenes and Plato, in their day, served in that capacity. Hippocrates considered a knowledge of the causes of disease essential to every physician. Pliny wrote to Trajan about a fœtid spring or an offensive stream that bred disease while passing through Amastris. The Romans, too, were

celebrated for their nice systems of drainage and sewerage. It seems to have been a rule with them, that from the time when the foundations of a city were laid, to that of the summit of its greatness, no structural operation, public or private, should be permitted to take a shape which might render it a harbor either for disease or crime." History informs us, gentlemen, that hardly a nation in any age has dared to neglect proper hygienic regulations; and the worst epidemics, that have devastated and sometimes decimated countries and cities, were begotten by unnecessary exciting causes that might have been avoided. Dr. Southwood Smith, an English physician, says, in regard to fevers that prevail in large cities—"In the districts in which fever most prevails, there is uniformly a bad drainage, a bad sewerage, a bad supply of water, a bad supply of scavengers, and a constant accumulation of filth." In London alone there are annually 16,000 cases of fever terminating in death, out of 200,000 cases. Dr. Playfair says, that in the large cities of England, at least, there are 250,000 cases of unnecessary sickness, and out of these 10,000 unnecessary deaths.

Reliable statistics, derived from careful calculation, go plainly to show that disease and death follow in the wake of filth and uncleanness, while health, long life and happiness are the results of careful sanitary measures. The most fearful epidemics that have ever occurred in this country can in most instances be traced to some immediate exciting cause. From the report of the Sanitary Commission we learn that the "Pepperell Fever," so called, that occurred in 1775, extending to 1778, in which 540 persons were attacked out of a population of 700, was caused by miasma arising from a swamp that had been overflowed, filled with trees and brush until rotted, and then allowed to dry. "In 1796, a very malignant typhus appeared in Boston, and great numbers died. Dr. John Warren says, that the physicians of the day were of the opinion that it originated in local causes." "A malignant dysentery in the town of Sheffield, confined to a section of town half a mile in diameter, containing 600 inhabitants, attacked 300, of whom 44 died. This sickness occurred around a pond that had recently been drawn off, leaving a vast amount of dead and decaying matter, which filled the air with a poisonous stench." "A little more than fifty years ago, a large tract of swamp and timber land, in Pittsfield, was overflowed with water. When the timber had died, and the brush and leaves were well decayed, it was drained off. All around this spot, for two or three miles, the people were attacked with fever and ague, and bilious fever, and a great many died. The owner of the premises was prosecuted for supporting a common nuisance, and the dam was destroyed. After this, these diseases entirely disappeared." When the South Hadley Canal was built, and some portions of swamp and meadow land in the vicinity flowed, in the town of Northampton, a great many of the people in the vicinity were attacked with remit-

tent and intermittent fever. Physicians are present to-day who are acquainted with the facts. "The famous Sunderland fever," so called, that a few years ago swept "over some parts of that town with considerably fatal results, was without doubt caused by miasmatic poison, generated by the overflowing and drainage of some portions of the immediate district." I might transcribe here a long list of epidemics, that have occurred from time to time, traceable directly to immediate exciting causes without the least possible doubt.

Sporadic cases of disease come to the knowledge of us all, which we can trace directly to some exciting cause. A badly-ventilated sleeping room, an impure and filthy cellar, a puddle of dirty and fermenting water under a sink-spout, decaying vegetables, filthy habitations and clothing, unwholesome diet—all these, and a multitude more, are often the positive and direct causes of disease, in which, gentlemen, neither you nor I can see, either the "foreordination" or the "providence of God," but usually the carelessness of the unfortunate progenitor of his own malady, who with proper diligence and care might have avoided entirely the pains and penalties of disease, and the attentions and care of the physician. Diseases sometimes occur, they often do, without any discernible cause; but carefully prepared statistics do show, that both epidemic and sporadic diseases are often directly generated and propagated by immediate and positive exciting causes. It illy becomes medical men, and the conservators of the public health as they are supposed to be, to fold their hands and say, "Diseases come and go by the providence of God, and we will therefore do nothing to prevent or stay their course, and thus interfere with one of the 'Plans of Creation.'" Medical men who teach such delusions as these have certainly missed their calling, and it would be well for them to search diligently for truth that has stood the test of ages gone by.

Again: Diseases having appeared, whether epidemic, endemic, or sporadic, or by the "foreordination of God" among the "Plans of Creation," can we, by medical means, or sanitary measures, do anything to modify, shorten, ameliorate or stay them in their courses? In self-limited diseases, so called, are medication and the proper attions of a physician calculated to abridge, amend, and render them more tolerable and less dangerous? Let us take an example in one of the exanthemata, a class of diseases usually called self-limited. The first I will name shall be scarlatina. It is perhaps as nearly self-limited as any; that is, it appears in regular stages—each stage is marked by peculiar phenomena—it exists for a certain, not definite period of time, giving way to other stages and other phenomena, and finally passes off entirely. Here is a self-limited disease, sometimes ending in a week and sometimes lasting six weeks, taking in the sequelæ. Shall we let it alone? Shall we stand and view it as we would an eight-day clock, and let it tick out its own destiny? Dr. Cotting would without doubt say, Here is one of the "regular

providences of God"—a link in the chain of His foreordained purposes—a little unit in the "Plan of Creation" not to be disturbed by human interference. Let it alone, to work out its premeditated phenomena, in cure or death—the patient will recover or die, as God wills it. Perhaps so, but proper medical means are among God's kindest providences towards accomplishing his ends, in the restoration of the sick to health. It might be better to throw Bibles, ministers and religious books into the sea—better for obdurate sinners; but we confess we do not view the thing in that light. Many cases of scarlet fever, no doubt, would recover if left entirely alone to run their natural course; but many, I believe, would prove fatal were it not for skilful medication. By discreet medical means, cases that would have proved malignant and dangerous are rendered mild and manageable. Cases commencing with very formidable symptoms—vomiting, hurried respiration, convulsions and great heat—how often, gentlemen, have we seen rendered mild and manageable by emetics and sudorifics, and other proper remedies to relieve these symptoms. What medical brother here has not witnessed the most decided benefit from topical applications and remedies applied to the inflamed, ulcerated and gangrenous fauces? Who would not, according to an honest and well-settled judgment, often have lost his patients if by proper means he had not checked the copious purgings that sometimes occur? And the anasarca that often follows, how promptly relieved by diuretics and tonics, skilfully administered! All through every stage, in this perilous disease, the skilful medical man, watching with an experienced eye, can discover dangers, and avert them by the direct administration of well-chosen remedies. *We know it*, both by observation and experience.

But, says the objector, "how do you know but that the same good results would have appeared without any remedies?" We answer, if there is any truth in a positive mathematical demonstration, then there is in medicine. If a positive result follows a positive and definite act, it is all we desire to prove. There are conditions in these cases, where death would inevitably follow if not immediately relieved. We apply the remedy, and the desired result follows—and so clearly and conclusively, that we know the means accomplishes the end. We subdue fire, by dashing on water. We might be asked, "how do you know but that the fire would have gone out of its own accord, without the application of water?" It would be equally senseless to ask, in many cases of scarlatina, "how do you know but that your patient would have recovered if you had used no remedies?"

Rubeola, or measles, is another self-limited disease, so styled. In the tardiness of the appearance of the eruption, in the exhausting diarrhœa, the severe cough and dyspnœa, and in the alarming sequelæ of this disease, what successful practitioner is there who has not seen the kindest and most marked beneficial results of well-applied

medication? There is not one of the exanthemata, gentlemen, however mild, but what some medicinal remedy may prove in it a comfort and a blessing. If it were nothing more than a gentle anodyne to assuage restlessness and peevishness, medicine becomes a comfort and a benefit not to be withheld. Shame be upon that practitioner, who, dallying with theoretic delusions, refuses the feeblest help, even in a perfectly harmless disease, where it can afford to his patient relief and comfort, without any subsequent harm.

But we will pass on to some of the more important diseases. Pneumonia, Dr. Cotting styles "one of the best examples of a self-limited disease." He says, "Pneumonia was considered, formerly, a fatal complaint unless subdued by venesection in the onset. Now it is instanced as one of the purest examples of a self-limited disease." Let us examine this statement with candor. Those gentlemen present who treated pneumonia twenty-five years ago, in nine cases out of ten bled their patients freely in the onset, gave them antimonials freely, and concluded the case with blisters applied to the chest. Twenty-five years ago, pneumonia was a highly inflammatory disease in nearly every instance, and required just such treatment as that named above. And to-day, whenever pneumonia presents itself in such a highly sthenic character as it did then, there is no other treatment that will save life. But the disease has changed in its character. We now most often meet cases of an atonic character, and pneumonia typhoides is of very frequent occurrence. Hence the change in the treatment. We substitute the veratrum viride for venesection, and instead of antimony we give expectorants that do not depress, and hold up the powers of life with stimulants and tonics. It is the character of the disease that modifies the treatment.

But is pneumonia a self-limited disease? Is it as much so as it was twenty-five years ago? Has it any more of a claim to self-limitation than pleuritis or typhoid fever? Let me relate a couple of cases to illustrate this point. Last January I was called to a case of pneumonia. The subject was a gentleman, aged about 30 years, stout, strongly and compactly built, and of a sanguine temperament. I found him with a strong, round pulse, at 100 beats per minute. His face was almost purple, and the veins stood out like whip-cords on his forehead and temples. There was great dyspnœa, and a dry, hacking cough, with expectoration of a bloody mucus. I opened a vein at once, and bled him twenty-five ounces, and put him upon a strong solution of the emetic tartar salt. On the sixth day, I covered the whole chest with a blister, which drew handsomely. The disease rapidly subsided, and in about two weeks he was well and about his business. The second case was Miss A. C., aged 25, who was attacked with the same disease about the same time. She was a thin, pale lady, and of a nervous and excitable temperament. I found her with a small, quick pulse, running up to 125 beats in a

minute. Respiration hurried, continued cough, with the expectoration of mucus the color of dirty iron-rust. Every symptom was of a typhoid character. I gave her the veratrum viride in very small and often-repeated doses, mingled with the syrup of squills. After a few days, I applied a blister to the chest, and gave whiskey-punch and beef-tea very liberally, and occasionally camphorated ammonia. Her convalescence was slow and tedious, and it was at least four weeks before the cure was completed. Both these cases were pneumonia, and both had the same exciting causes. But if I had given the first case the treatment of the second, and *vice versâ*, probably both my patients would have died. Or, if I had considered them cases of a self-limited disease, folded my hands and left them to the "*vis medicatrix naturæ*," probably the same result would have followed.

Dr. Cotting says, in his discourse, "The great facts of our science are permanent, and however feebly stated from time to time, or hesitatingly received, will at last prevail and triumph. False assumptions are dangerous expedients, which the most ignorant will ever be most likely to practise. Truth is weakened by any addition of error, and the profession that allows it must in the end abandon its own self-respect." Dr. Cotting, in my opinion, has described his own case exactly. He fails to perceive the great facts of our science, his assumptions at least are dangerous, he endeavors to weaken truths as old as Hippocrates himself by inculcating error, and he seems to have lost a proper respect for the fundamental truths of medical science. If he is right, ninety-nine out of one hundred of the profession are wrong.

Pleuritis, also, Dr. Cotting would call a self-limited disease—one of the special providences of God. When called to such cases, what would our patients think of us if we should bid them wait and let the disease take its natural course? Heroic treatment is demanded, and with energy and promptness if we would give our patients relief and save them from dangerous consequences. Bilious colic, croup, and other kindred diseases, demand the most skilful and energetic treatment in order to ensure escape from sudden and painful death. I once had a patient strangling to death with a chicken-bone in the larynx—probably it was one item in the "Plans of Creation." By another "fore-ordained purpose" I extracted it as soon as possible, and thereby saved the patient's life. Our duties are equally as plain and as efficient sometimes in the most simple diseases. If God has forcordained dangerous and painful diseases, He has also endowed certain substances with medicinal virtues for their prompt and speedy relief, if properly administered by skilful hands. Because people are sometimes over-drugged by "charlatans and quacks," or if they sometimes kill themselves by taking patent medicines so called, it is no fault of the profession. We should ever be ready to rebuke the indiscriminate use of all medicines, and to discountenance quackery, but we will not bear the blame of the unskilful use or adminis-

tration of means, out of time, out of place, and in the hands of empirics. The misuse and the abuse of medicine have engendered a suspicion that often falls upon the honest and discreet practitioner when he in the least does not deserve it.

Typhoid fever, too, is getting to be regarded, by many, as a self-limited disease, with its periods of incubation, full formation, decrease and termination. With these views, it is left pretty nearly to itself, to run its course to its termination in recovery or death, with very little medication. Homœopathy has taught us that many cases will run their course and recover, without *any* treatment, and, also, that a *great many cases* will die without any treatment, by the "special providence of God." But what observing practitioner does not know, self-limited disease though it be, that very often typhoid fever, in its incipient stages, may be entirely broken up and driven from the system by the revulsive, alterative and depurative action of a thorough emetico-cathartic? Who does not know that the introduction of tonics, at the proper time, will cut it short, and greatly accelerate the cure? Who does not know that many of the conditions and unkind features of the disease are promptly relieved by medical means? Coma, subsultus tendinum, tympanites, hæmorrhage from the nose and bowels, inflammation of the mucous surfaces, ulcerations, &c., how promptly relieved by proper remedies!

Do not deem me irreverent, gentlemen, when I say, it would be far better for such theorists as Dr. Cotting to use a little less of the "Plans of Creation," of the "foreordination" and "special providence of God," and a little more of sound medical common sense, in attacking disease boldly with abundant and well-applied remedies. The doctrine inculcated by Dr. Cotting is plainly this, that neither time, place, circumstances, nor hardly any condition of things, will prevent diseases from occurring. How is it with venereal disease? Is *that* usually contracted by the foreordination and the special interposition of Providence? I should rather suppose that the devil exercised an agency here, before any higher power. It may be contracted by accident, or heedlessness, and probably most often is, but cannot the cause be totally avoided? A life of virtue never begets gonorrhœa or syphilis; hence, if we follow in virtue's paths, and in the ways of wisdom, these diseases will not trouble us. But, the disease once contracted, what then? Why, we *cure it* by a specific. We do not stop—calling it a self-limited disease, fold our hands and let it alone. Such a course would be peril and death. We use the means that wisdom has provided, with speedy relief and cure.

There is a certain class of diseases that are generated by certain specific causes, acting directly upon the blood and nervous system. If these causes are avoided, as they often can be, the disease is not contracted. It is, then, the agency of the individual, not of Providence, that operates in the production of the disease. Such a disease is intermittent fever. Avoid malarious districts, and fever

and ague will never be contracted. But, once contracted, how is the disease cured? By waiting for its self-limitation? By trusting to the expectant method? By medicating with remedies that are uncertain, and hoping that the providence of God will effect the cure? By no means: in this case we have a specific, in spite of the doctrine now too often advanced that there are no specifics. Give the patient an emetico-cathartic, and on the day following the paroxysm commence treatment boldly with sulphate of quinine in doses of from five to ten grains, repeated every eight hours, and not one case in a hundred will fail of being cured in a single week. We all know that quinine is as much a specific in intermittent fever as sulphur is in scabies.

Chorea, too, is a disease frightful and repugnant in every aspect, and one once considered so difficult of cure. How soon it yields to the proper and almost specific remedy! Very obscure is this disease in its pathology, and so much so, that I would not dispute with Dr. Cotting whether or not it came directly by the special providence of God, yet in its cure, so far as my own experience goes, it is quite as tractable as intermittent fever. Of all diseases we are acquainted with, if let alone, it is the least creditable for self-limitation, and if not treated with the proper remedies will run on for an indefinite period of time. Now arsenic, in the form of Fowler's solution, so far as my observation goes, will cure chorea in about two weeks, in nine cases out of ten. How utterly recreant should we be to the great responsibilities of our calling to stand idly by, trusting to self-limitation, the healing powers of nature, or even to the "providence of God," in such a disease as this, if by well-chosen remedies, properly administered, we can spear disease to the wall, and give back the precious boon of health to our patients!

I will bring to your notice one single disease more. Chlorosis is a disease, the pathology, symptoms and general history of which we are well acquainted with. A patient presents herself for our examination and advice. How plain the picture of the havoc of disease! Pale, even to the whiteness of the lily—emaciated, and so bloodless that some parts of the body are almost transparent. The pulse so soft and small, it would seem that the channels of the circulation were almost dry. Timid and trembling, from lack of vital force and nervous energy. We recognize the character of the disease at a glance. We *know* that by some unnatural drain upon the system, a want of blood-pabulum is the immediate cause. We *correct* the first cause, and *supply* the second. We strengthen the digestive system, and give it a proper supply of nutritious food, adding as a remedy what the blood most needs—iron, in the administration of some well-chosen chalybeate. How very soon we mark the change! The dull eye assumes its usual brightness. The pale cheeks bloom again with the roses of health. The blue, sluggish veins run with crimson currents, and the emaciated frame gathers fatness. A new vitality

pervades the whole system, and health is restored to her rightful throne. Would the expectant treatment accomplish all this?

But, gentlemen, I am wearying your patience. The subject demands only a brief notice. I have given it in a spirit of kindness, entertaining, as I do, for the author of the paper alluded to, feelings of respect as a gentleman of the highest culture.

Let me say in conclusion, gentlemen, do not forsake the *wisdom of the past* for the uncertain theories and delusions of to-day, especially when they are taught us in high places, by those among ourselves. Let us rebuke error, wherever and whenever she steps within our path. No great, nor even small truth, can ever die. The iron heel of inflated delusion may trample truth into the dust, but can never destroy her. Her existence is eternal. The long-established *truths of our profession* are what we must deal with, in our daily labors among the sick. Nothing that will not stand the test of the soundest philosophy should ever be allowed to sway our judgments, or turn us from the faith of our profession. Theories are not truths. Let us receive no new truth until it is well established, and look upon theory as the twin-sister of error. And we will *purge out* the dross, that the great truths of our profession may glitter like gold.

Bibliographical Notices.

The Student's Book of Cutaneous Medicine and Diseases of the Skin. By Erasmus Wilson, F.R.S. New York: William Wood & Co. Pp. 445.

Mr. Wilson has so recently published a revised edition of his well-known work on skin diseases, that we read with great curiosity the announcement in the English journals of an entirely new work by him on the same subject, and in the preface of the present volume we find the explanation of its appearance. Strange to say, in spite of the frequent editions of his own book and the numerous treatises which have been published in Great Britain within a year or two, he became aware of "a want in medical literature" and of the necessity of a work "founded on British Cutaneous Medicine, that is, upon cutaneous diseases such as they occur in this country, and exist amongst us at the present day, and treated upon principles which long experience has shown to be the best suited to the instincts and peculiarities of the British mode of thought, and of the British medical constitution." To those of our readers who have been in the habit of regarding cutaneous diseases as cosmopolitan in their nature and unaffected by the British constitution, and who are not familiar with the character of some of the works recently issued in that country, we would say that several young Englishmen, contrary to their national "instincts," having studied these affections under the teaching of Hebra in Germany and Hardy in France, proceeded to publish the results of their observations on their return, which were received with favor. The new methods of treatment which they brought back with them were

also used with success upon British skins, and hence the necessity for and publication of the book before us. None the less strange, also, will the closing paragraph of the preface appear to those who remember the recent attempt of the author, himself a specialist, to establish under somewhat disreputable circumstances a special hospital in London for the treatment of skin diseases. "Our aim has been to simplify, to endeavor to restore to general medicine, a department of much interest and importance, and, by furnishing the student with a clear view of these diseases, to remove them from the narrow sphere of specialism to the wider and nobler field of catholic medicine."

We have so lately reviewed at length the former and larger treatise of Mr. Wilson that there remains for us to notice in the present volume only those points in which it differs from that, and these are chiefly a new system of classification of his own and several methods of treatment borrowed from sources outside of Great Britain. Renouncing the old and artificial system of Plenck and Willan, which he extols at first as a whole only to expose its absurdities later and in detail, and declaring all natural, anatomical and pathological systems as impracticable and unsatisfactory, he adopts a mixed classification, based upon them all, as follows :—

Clinical Classification.

1. Eczematous affections
2. Erythematous affections
3. Bullous affections
4. Furuncular affections
5. Nervous affections
6. Vascular affections
7. Hæmodyscrasic affections
8. Developmental and nutritive affections
9. Hypertrophic and Atrophic affections
10. Zymotic affections
11. Alphous affections
12. Strumous affections
13. Syphilitic affections
14. Carcinomatous affections
15. Leprous affections
16. Affections of the hair and hair-follicles
17. Affections of the sebiparous apparatus
18. Affections of the chromatogenous apparatus
19. Affections of the sudoriparous apparatus
20. Affections of the nails
21. Traumatic affections
22. Phytodermic affections

Under the head of Eczematous Affections, we find Eczema, Psoriasis,* Pityriasis, Lichen, Impetigo, Scabies and Gutta rosacea. All of these, with the exception of Scabies, which is also in great part an Eczema caused indirectly by the presence of the sarcoptes, are merely forms or stages of the first affection, as the author is gradually and reluctantly coming to confess. This group is placed first in order, and inasmuch as Eczema is the *commonest* disease of the skin, and is "not limited to a part, but is general in its invasion and capable of attacking every region of the cutaneous surface, we may follow up eczema with three other groups, possessing a similar generality of character, and, like the eczematous group, each represented by a substantive disease." Thus Erythema, Pemphigus and Furunculus are considered as type affections round which the next three groups are arranged. In the 5th and 6th groups, the Nervous and Vascular, we find a new basis adopted, namely, one founded upon the anatomy or locality of the parts affected. In the former family, however, we find Prurigo, a disease which is no more properly placed there than any of

* By Psoriasis is not meant Psoriasis, but Eczema.

the first group would be, inasmuch as it is an exudative process like them, and, as the author himself states, "involves an alteration of the structure of the skin." The itching which accompanies it, too, is no more characteristic of a nervous affection than the same symptom in Eczema or Scabies. From anatomy we now pass to pathology for the establishment of the Hæmodyscrasic class of affections, but branch off again into Developmental and Nutritive affections and diseases resulting from Hypertrophy and Atrophy. Under the former, however, we find only several forms of Ichthyosis, whereas, according to the pathological views of the author, nearly every disease hitherto mentioned, and those to follow, are dependent upon disorders of nutrition. Why Ichthyosis or Xeroderma, as the author chooses to call some of its forms, are more properly arranged under this head than any of those, the author does not make apparent. The 10th group comprises the exanthematous diseases. We now come to an affection which is made the type and the only member of a new order in this heterogeneous classification, namely, Psoriasis. The author having in his former works called it at one time by the name of another affection, Lepra, which is Leprosy or Elephantiasis, and having applied this, its true name, to a form of Eczema, in spite of his promise in the preface to his last edition to call these diseases by their correct names in future, adds still more confusion to the complicated nomenclature of skin diseases by employing an obsolete and undefined name of past centuries and calling it Alphos. Pathologically it should be placed near the exudative processes of his first division, for it is no more a specific or "diathetic" affection than any of those already named.

The next, or strumous family, is also founded upon an imaginary condition of the body, and includes Lupus, with which it has no more established connection than with the next group, the Syphilitic, to which he has hitherto directly referred it. Making two constitutional divisions, as they may be called, of the Cancerous and Leprous affections, he again falls back upon the anatomical or regional basis, upon which he establishes the five succeeding families. In the last, or Phytodermic group, we behold the reverse of the modern theory of progressive development, or the application on a microscopic scale to modern dermatology of the old fable of Daphne metamorphosed. We are told that an arrest of development is the cause of the constant modification of destiny in the epidermal cells, and that they are "no longer able to rise through those higher stages of animalization which culminate in the production of horn, but doomed in their crude condition to the lowest function which belongs to immature organic matter, namely, proliferation;" and, farther, that these parasitic diseases "are founded on a peculiar metamorphosis of the elements of the epidermic cells, by which the nascent cell is converted into a structure closely resembling a vegetable organism, and possessing the attributes of the mucedines."

This, then, is the new plan of classification designed to supply a want in clinical instruction. It is not thought necessary, we believe, in other departments of medicine to provide distinct systems of nosology for the student and the physician, nor if it were do we see how the study of skin diseases is rendered more easy for the former by such a mixed and unsystematic system as this proposed by Mr. Wilson. Cutaneous affections are in no way an exception to the general

laws of pathology, and should be studied and arranged with reference to these alone. As we stated above, it has not been our intention to review the subject-matter of the book, which does not differ materially, except in brevity, from the larger work by the same author. We cannot recommend a work as particularly adapted to the wants of the beginner which separately describes thirty-five varieties of the first affection it treats of, and which employs such a complicated system of nomenclature as is contained in the following paragraph, which is a fair specimen of a great portion of it :—"Xeroderma saurioides, or ichthyosis spuria, is a xeroderma, in which, besides the ordinary symptoms appertaining to that disease, there is also an accumulation of sebaceous substance on the surface of the skin, the sebaceous substance undergoing inspissation by desiccation, and one while assuming the form of scales, *sauriderma squamosum ;* and another while of spines, *sauriderma spinosum.*" What, moreover, can be said of a teacher of youth who so obstinately opposes his individual views to the unanimous verdict of the scientific world as in the matter of the parasitic nature of favus, &c., and who passes by unmentioned the modern theories in relation to syphilis?

In point of treatment we find, as before, arsenic recommended as an almost infallible cure in nearly every affection, and yet local treatment is much more insisted upon than in his former works, and is often advised as being indispensable in cases where the arsenic is previously spoken of as a specific. Juniper-tar soap will be found to be recommended on nearly every page in the book.

With the exception of the paper, the publishers have done their work in a correct and creditable manner.

Researches on the Medical Properties and Applications of Nitrous Oxide, Protoxide of Nitrogen, or Laughing Gas. By Geo. J. Ziegler, M.D., Physician to the Philadelphia Hospital, &c. Revised and republished from the Medical and Surgical Reporter. Philadelphia : J. B. Lippincott & Co. 1865. Pp. 66.

Nitrous oxide has come so largely into use of late as an anæsthetic in dentistry and minor surgery, that the profession has long been desirous of some definite and reliable information in relation to its supposed physiological and therapeutical properties. We were not prepared, however, for such transcendant powers as the author of the little volume before us attributes to it, for in it he has discovered the much-desired elixir of life. We fear that we should fail to do justice to his views if we attempted any critical analysis of them, and prefer, therefore, to give a few extracts illustrative of the wonderful properties of this substance as he describes them :—

"Protoxide of nitrogen is remarkably active and potent in promoting the various functions of digestion, absorption, circulation—both general and capillary—aëration or arterialization, hæmatosis, calorification, assimilation, disintegration, depuration, secretion, excretion, muscular and general contractility, innervation, and intellection ; and likewise, those of the reproductive system. * * *

"It is indeed *sui generis*, as in consequence of its peculiar chemical constitution and properties, its specialty and potency of physiological action, its extensive range and variety of sanative application—hygi-

enic, therapeutic, revivifying, antidotal, and anæsthetic—it differs greatly from, and is superior to the best and most powerful of known remedies. * * * * * * *

"In view, therefore, of its peculiar and valuable sanative properties, nitrous oxide promises to be a very efficient general substitute for some of the most potent and expensive remedial agents known, such as, for instance, alcohol, ammonia, quassia, strychnia, mercury, and others, variously classified as diffusible and permanent stimulants, tonics, antiperiodics, antispasmodics, alteratives, secernents, &c. * *

"Thus, in comprehensive terms, nitrous oxide is a direct, potent, and permanent chemico-organic, arterial, nervous, cerebral, and general stimulant, secernent, depurant, aphrodisiac, and antitoxic, having a special tendency to the blood, brain, nervous system, and genito-urinary organs. It exerts a powerful invigorating influence over the entire economy, and is a superior nutrient, hæmatic, neurotic, tonic, disintegrant, diuretic, disinfectant, alterative, resolvent, sorbefacient, antidote, antiseptic, &c. &c. * * * * *

"It is therefore especially indicated in indigestion and inefficient absorption, as also in general inactivity of the chylopoietic functions; in imperfect aëration or arterialization of the blood and deficient hæmatosis; in mal-assimilation and disintegration; in insufficient secretion and depuration; and, in irregular or defective motility, contractility, innervation, and cerebration. Hence in the various forms of asthenic dyspepsia and other morbid states dependent upon or associated with torpidity of the chylopoietic viscera; anæration, anæmatosis, and mal-nutrition generally, both primary and secondary; in depraved and defective secretion and depuration; in enervation, neuralgia, chorea, paralysis, melancholy, amentia, and adynamic states generally, the nitrous oxide will, doubtless, always prove more or less useful as a curative agent. * * * *

"It will thus be seen that protoxide of nitrogen has a very wide range of therapeutical application in that class of maladies connected with the undue or irregular production of such substances indicated, especially when of an amyloid, glucoid, ceroid, adipoid, albuminoid, or pigmentary character. * * * *

"It is applicable to the preventive and curative treatment of quite a number of urinary affections—such, for instance, as anuria, anazoturia, chyluria, oxaluria, and other varieties of lithuria, dysuria, hydruria, hæmaturia, enuresis, cystorrhœa, paralysis of the bladder, and others of a similar character. * * * *

"It is particularly indicated in the various ataxic and adynamic fevers, such as the typhus, typhoid or enteric, congestive, yellow, remittent, intermittent, and all others of a similar type. Nitrous oxide is, moreover, of general application and quite efficient in scarlet fever, measles, diphtheria, variola, constitutional syphilis, erysipelas, gangrene, and kindred maladies. It may likewise prove more or less useful in sunstroke, pyæmia, purulent infection, puerperal fever, and necræmic and toxicæmic affections generally, those from septic poisons and the virus of venomous and rabid animals inclusive. * * *

"From this cursory sketch it will be apparent that protoxide of nitrogen has a very extensive range of medicinal application, and, *cæteris paribus*, is well adapted to the curative treatment of all depressed, morbid, and toxic states in which a chemico-organic, arterial, nervous,

cerebral, and general stimulant, nutrient, alterative, resolvent, absorbent, secernent, antiseptic, antitoxic, and revivifying influence is required."

But we have by no means exhausted the catalogue of its miraculous powers, for it is also applicable in elephantiasis and cancer, dissolves urinary and bilious calculi, and throws Bantingism into the shade. In support of all these theories we find not a single fact given by the author, not the history of any case in which it has been employed or of an experiment performed to test its physiological action. The tendency of such a book can only be to throw ridicule upon the whole subject, and to prevent competent observers from making such philosophical investigations as will place it in its proper position as a remedial agent.

The elegant appearance of the book proclaims at once the house which publishes it.

The Use of the Laryngoscope in Diseases of the Throat. With an Appendix on Rhinoscopy. By Morell Mackenzie, M.D. Lond., Physician to the Dispensary for Diseases of the Throat. Philadelphia: Lindsay & Blakiston. 1865. Pp. 160.

The profession is much indebted to the publishers for an American edition of this book in so handsome a form. It is the best monograph which has appeared in our language on an art which has not yet received the attention it deserves in this country, and which promises to remove diseases of the throat from the state of ignorance and empiricism in which they have so long remained. It contains a history of the invention and introduction of the laryngoscope, with full descriptions of the various instruments and apparatus connected with them now in use and the method of employing them. Although the author does not offer this as a treatise on these diseases, many cases in his practice are quoted to illustrate the effect of the instruments and agents he employs in laryngoscopy. Such a work, however, is announced as shortly to appear by the same author. A descriptive chapter on Rhinoscopy is added to the volume, and it is illustrated with well-executed figures and beautifully printed.

Lectures on the Diseases of the Stomach, with an Introduction on its Anatomy and Physiology. By William Brinton, M.D., F.R.S., Physician to St. Thomas's Hospital. From the Second English Edition. Philadelphia: Lea & Blanchard. 1865. Pp. 302.

This book has been so long known to the medical profession as the most complete work in our language on the diagnosis and treatment of these puzzling and important diseases, that it needs no commendation from us. In preparing this second edition, the author has incorporated the results of his own extensive experience within the last six years, as well as the most recent views bearing upon the physiology and pathology of the process of digestion, and has added two new chapters. The practitioner will find it one of the most useful books in his library, and it is published in a very neat and convenient form.

The Physician's Handbook of Practice for 1866. By William Elmer, M.D. New York: W. A. Townsend, Publisher. 1866.

This convenient pocket-book makes its ninth annual appearance in the same form as last year. We can recommend it, as we always have done, as in many respects the best adapted to the daily wants of the visiting physician.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, NOVEMBER 2, 1865.

Massachusetts Dental Society—First Annual Address, by Dr. N. C. Keep.—Of late years, unless we are greatly mistaken in our opinion, the department of dentistry, while it has been occupied by very zealous and active practitioners, has been gradually separating by a steadily increasing interval from the other branches of the medical profession, until at the present time it is hardly recognized as legitimately belonging to it at all. The community at large fail to appreciate the full scope and importance of its relations in this respect, and very many people have come to regard it as but little above a merely mechanical art—that of tooth-drawing, tooth-filling, or the insertion of artificial teeth. In accordance with this tone of public opinion, we find that by degrees many persons have taken up the practice of dentistry for a living who by their qualifications of education or ability are in reality to be considered as little better than a class of skilled or unskilled mechanics. This class has grown to such an extent that we are inclined to believe they constitute the majority of those who style themselves dentists. We cannot but look upon this state of things as a great evil. The comfort and welfare of the community are too dependent on the services of this most useful branch of our profession, for this decline in their professional standing to be regarded in any other light than that of a public misfortune. It opens the door for unbounded quackery and mischief, against which the public has not the slightest means of self-protection or redress. For when an ignorant pretender appends to his name the title of dentist, what guarantee is there that he will not do quite as much harm as good to those who are so unfortunate as to trust him? Or how can the patient form a just opinion of the treatment to which he is subjected, whether it be good or bad?

It is with these impressions on our mind that we hail with great satisfaction the effort now making in our State to elevate the professional standard of practitioners in dentistry, to bring them up to the place where they properly belong, that of specialists, it is true, but still within the domain of legitimate medicine. It is an important question, how much of the full preparatory course of a general medical education is necessary for the practitioner in dentistry. In former days, the number of those thus fitted was much larger than at present. While fully appreciating the value of such a preparation, and fully believing that no man can know too much at any time of the subjects allied to his calling, yet we can well understand how a course of medi-

cal education somewhat less full than that required for the general practitioner in medicine may be sufficient for the needs of those who limit their practice to this single branch. In the present state of public opinion, also, we believe it would be impossible to induce this class as a body to qualify themselves in this way before commencing practice. It should not be forgotten, either, that there are extensive departments of this specialty, such as the elaborate processes of making and fitting artificial teeth, which are not taught in the curriculum of any of our medical colleges. There is a necessity then for some provision not heretofore existing, by which the standard of professional honor and skill among dentists shall be raised. How is this to be accomplished?

The first step which has been taken in our State is the organization of a State Dental Society, and the first annual address before this Society, by Dr. N. C. Keep, is now before us. We have read it with great interest and profit. It sets forth in simple and forcible language the great importance of the objects of which we have been speaking, and is full of the highest feeling of professional self-respect and professional honor. If its numerous wise and humane suggestions are adopted as the guiding principles of this association, the public cannot fail to be placed under the most lasting obligations to it.

Dr. Keep is highly conservative in the tone with which he speaks of the practice of his art. He greatly deprecates the wholesale way in which, under the veiling cloud of anæsthesia, vast numbers of the community have been deprived of their natural organs of mastication to be replaced by the poor substitutes, however skilfully made, which human ingenuity can supply. He speaks with great emphasis of the importance of making his profession a liberal one; so that its members may rise above the petty jealousy of tradesmen, and communicate freely to each other any improvements or discoveries which they may happen to make. He dwells upon the great value of a preparatory education in general science, such as the Institute of Technology offers, and avows his strong predilection, in addition, for a united dental and medical education. In these views he certainly has our hearty concurrence, although, as we before remarked, we greatly fear the number of those willing thus to prepare themselves will be comparatively small. In this connection he makes a suggestion, which strikes us most favorably, that it would be well for our public hospitals if they had a dentist attached to each of them. As all officers of hospitals know, the occasions are not infrequent, particularly in the surgical department, where the knowledge and manual dexterity of a skilful dentist would be of inestimable value. And so the worthy President of the Dental Association goes on in a strain of practical wisdom and earnest professional interest, stimulating his audience to renewed efforts to bring up their practice to a higher level, worthy of a truly liberal profession.

In conclusion, we are glad to be able to state that the Dental Association, in accordance with the feeling which animated the President's address, has organized a system of regular meetings for the discussion of professional subjects, the reading of papers, &c., and that it is proposed to establish a museum of pathological specimens. This is a good beginning, and the end can hardly be otherwise than beneficial to the whole community.

The address of Dr. Rice, which we publish this week, is, as our readers will see, a most emphatic expression of dissent from the views held by Dr. Cotting, as given in his annual address to the Massachusetts Medical Society. While it contains many undeniable truths, we cannot but regard it as an exaggerated statement of Dr. Cotting's opinions, and as far from impregnable in some of the positions which it assumes, at the same time that it is wanting in the courtesy of manner which need not be forgotten even in a controversial article. But we have already expressed our views upon the subject, and must leave it to others to continue the discussion.

Medical Prize. Expectant Medicine.—One hundred dollars have been placed in the Treasury of the Massachusetts Medical Society, to be offered by the Councillors as a prize for the best dissertation on the following subject, the award to be made by a committee consisting of the President of the Society and four Fellows nominated by him:—

"Expectant Medicine—the extent to which it is practised at the present day, and the modes in which it is disguised or counterfeited."

Essays must be forwarded to the Chairman of the Committee on or before October 1st, 1866, each with a sealed envelope containing the name of its author, in the usual way.

Augustus A. Gould,
Boston, October, 1866. *Chairman of Committee.*

In accordance with the above announcement, the following committee has been appointed, namely: Dr. Henry J. Bigelow, Dr. Samuel L. Abbot, Dr. Calvin Ellis and Dr. David W. Cheever.

It will be seen that the terms of the subject cover all cases of honest delusion or wilful fraud in the treatment of disease, in all the forms of excessive medication or the infinitesimal dilutions of homœopathy. As the prize is open to all competitors, we hope that our distant professional brethren may be induced to compete for it.

Vermont Medical Society.—This Society held its annual meeting at the State House, Montpelier, Wednesday and Thursday, Oct. 18th and 19th. The President, Dr. O. F. Fassett, in the chair.

The first day of the meeting was devoted to the reading of papers and medical discussion, and the receiving of reports from the American Medical Association, and the delegates to the several State Medical Societies. Dr. L. C. Butler read a paper on "The Epidemics of Chittenden County," Dr. H. F. Stevens a "Biographical Sketch of the Life and Character of the late Dr. N. W. Fairchild, of Milton," Dr. Lemuel Richmond a paper on "Ascites," and Dr. Wm. McCollom one on "Criminal Abortion."

The recent death of Dr. L. E. Simons, of Saxton's River, was announced and appropriate resolutions adopted. Dr. Holton, of Putney, was requested to prepare a biographical sketch of his life and character. After an animated discussion of the pathology and treatment of jaundice by Drs. Russ, Holton, Sperry, Chandler and others, the Society adjourned.

The annual address was delivered by the President, on Wednesday evening, in the Representatives' Hall.

The early part of the morning session of the second day was occupied in the transaction of business and election of officers, after which Dr. Benj. Fairchild read a paper on "Coxalgia," and Dr. Ketchum one on "Cerebro-spinal Meningitis," which communications elicited interesting discussion. A committee was appointed for each county in the State, to prepare papers upon epidemics and prevailing diseases in their respective counties, and present them at the next meeting of the Society, or the next annual meeting.

The following officers of the Society were elected for the year ensuing:—*President*—Wm. McCollom, M.D., Woodstock. *Vice President*—Lemuel Richmond, M.D., Derby. *Recording Secretary*—L. C. Butler, M.D., Essex. *Corresponding Secretary*—C. B. Chandler, M.D., Montpelier. *Librarian and Treasurer*—Charles Clarke, M.D., Montpelier. Delegates were appointed to Burlington Medical College, the several State Societies, and the American Medical Association.

The afternoon of the second day was occupied with the reports of cases of interest and the discussion of medical topics.

The Society adjourned to meet at Brattleboro' on the second Wednesday in June.

We see by the newspapers that an epizoötia is destroying the horses used on the Erie canal, in New York. This is one of the warnings of the approach of cholera.

BOSTON DISPENSARY—STATISTICS FOR THE YEAR ENDING OCT. 1ST, 1865.

NEW PATIENTS.

Central Office.		*Districts.*	
Medical—Men,	1,379	Men,	1,091
Women,	4,899	Women,	2,649
Children,	4,555	Children,	2,913
Total,	10,833	Total,	6,653
Surgical—Men,	976	*Central Office and Districts.*	
Women,	1,462	Men,	3,456
Children,	1,919	Women,	9,010
Total,	4,357	Children,	9,387
Medical and Surgical—Total,	15,190	Total,	21,853

OLD AND NEW PATIENTS.

Central Office—Medical,	22,005
" " Surgical,	5,251
Total,	27,256
Average daily attendance,	88½
Districts—Births,	85
" Deaths,	188

NEW PATIENTS.

District.	*Physician.*		*District.*	*Physician.*	
1.	E. W. Aiken,	1,199	6.	John Hart,	597
2.	Vacant.	000	7.	Thomas H. Hoskins,	790
3.	A. I. Fenn,	1,265	8.	D. D. Gilbert,	392
4.	W. B. Mackie,	1,180			
5.	Charles K. Wheeler,	1,230		Total,	5,653
Total number of prescriptions,					47,104

Central Office—Attending Physicians and Surgeons.

Physicians.	*Surgeons.*
J. B. Upham.	Algernon Coolidge.
S. L. Sprague.	D. W. Cheever.
H. K. Oliver, Jr.	John Green.
S. H. Carney.	F. H. Brown.
Hall Curtis.	

Apothecary—A. K. Carruthers.

Consulting Physicians—Jacob Bigelow, P. M. Crane.
" *Surgeons*—S. D. Townsend, J. Mason Warren.

HOWARD F. DAMON, M.D., *Superintendent.*

QUACK MEDICINES.—Upwards of £55,333 has been paid during the last year for the government duty on quack medicines in England.—*Medical and Surgical Reporter.*

PREVIOUS to the discovery of vaccination, and when the population of Great Britain was only ten millions, the number of deaths annually from smallpox was 30,000. Now, with a population of thirty millions, the number of deaths is less than 10,000.—A statue has been erected at Boulogne to the memory of the immortal Jenner. It is ten feet high, and stands on a marble pedestal twelve feet high.—*Canada Med. Journal.*

THE Washington Park Military Hospital building, in Cincinnati, has been thoroughly refitted, and made a branch of the Commercial Hospital of that city. It is intended to be appropriated to the department of women and children.

The deaths by cholera in Paris, by the latest accounts, had reached two hundred daily.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, OCTOBER 28th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	37	36	73
Ave. mortality of corresponding weeks for ten years, 1853—1863	37.5	36.8	74.3
Average corrected to increased population - - - - -	00	00	81.02
Death of persons above 90 - - - - - - - - -		0	0

COMMUNICATIONS RECEIVED.—Accidental Phymosis, with Hydrocele.—Catarrh of the Nasal Passages cured by leaving off taking Snuff.

PAMPHLETS RECEIVED.—A Report upon Sundry Documents relating to Asiatic Cholera, transmitted by the Governor of Rhode Island to the Board of Health of the City of Providence. By Edwin M. Snow, M.D., Superintendent of Health.—The Compendium of Tachygraphy: or Lindsley's Phonetic Shorthand, explaining and illustrating the common style of the Art. By D. P. Lindsley.—Fourteenth Annual Report of the Boston Provident Association.—Directory of the Boston Provident Association.

DEATHS IN BOSTON for the week ending Saturday noon, October 28th, 73. Males, 37—Females 36. Abscess, 1—inflammation of the bowels, 1—disease of the brain, 3—cholera infantum, 2—consumption, 11—croup, 1—diarrhœa, 4—diphtheria, 2—dropsy, 1—dropsy of the brain, 3—drowned, 1—dysentery, 7—erysipelas, 1—bilious remittent fever, 1—typhoid fever, 1—disease of the heart, 1—homicide, 1—infantile disease, 1—congestion of the lungs, 2—inflammation of the lungs, 10—marasmus, 5—paralysis, 1—premature birth, 1—puerperal disease, 1—teething, 1—unknown, 3—varicella, 1—wounds, 1.

Under 5 years of age, 31—between 5 and 20 years, 4—between 20 and 40 years, 18—between 40 and 60 years, 12—above 60 years, 8. Born in the United States, 52—Ireland, 16—other places, 5.

THE

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THE RELATIONS OF HEALTH AND DISEASE.

Introductory Address to the Medical School of Harvard University, delivered November 1, 1865, by Calvin Ellis, M.D., Adjunct Professor of Clinical Medicine.

Gentlemen,—Although standing before you in obedience to the dictates of a long-established custom, I recognize a higher duty than that of satisfying the demands of mere routine. There must be but little vitality in the profession, if it does not admit of, or even demand at least an annual survey. Such an inquiry concerns alike those who stand upon the threshhold, seeking they hardly know what, those who are swept easily along by the current of routine, and others who are appalled, and, at times, almost discouraged by the problems forced upon them by daily experience.

With the many evidences of the popular perversion of the word profession, it is most essential that we should fully realize its true meaning. If elevated at all above what are regarded as the less honorable callings, it is because it implies fealty to the higher laws, the sternest loyalty to truth, abnegation of self, service and sacrifice. This is certainly not too much to demand from those who seek to interpret the laws of nature for the benefit of mankind.

Amid the scepticism and fluctuating opinions of the day, it would certainly be no easy task, even if it were a profitable one, to attempt to state precisely where we stand. Our position will be much better expressed by showing the direction in which we are moving; and it can be made clear that the advance in medicine is fully commensurate with that in other branches of science.

In past ages students of physical science have sought to develop the peculiarities of what they regarded as different forces and establish boundaries between them. These efforts have ended in the discovery that all forces are related and are convertible into each other; that light, heat, electricity, magnetism, &c., are only different modes of motion. In the world of matter, no loftier step was ever taken than this.

Although this truth, like many others, has been daily presented to the observation of men, it was not until 1798 that Count Rumford saw a most obvious example of it in the familiar phenomena of fric-

tion. When the temperature of a cylinder was raised by a revolving borer to the boiling point, and the quantity of heat produced was altogether incompatible with its previous existence in the solid matter, he saw that its source must be sought elsewhere, and was irresistibly led to the conclusion that it was "extremely difficult, if not quite impossible, to form any distinct idea of anything capable of being excited and communicated in those experiments except it were motion."

Another more complicated but equally conclusive experiment, by Grove, points in the same direction. "A prepared daguerreotype-plate is enclosed in a box filled with water, having a glass front with a shutter over it. Between this glass and the plate is a gridiron of silver wire: the plate is connected with one extremity of a galvanometer coil, and the gridiron with one extremity of a Breguet's helix—an instrument formed by a coil of two metals, the unequal expansion of which indicates slight changes in temperature—the other extremities of the galvanometer and helix are connected by a wire, and the needles brought to zero. As soon as a beam of either daylight or the oxyhydrogen light is, by raising the shutter, permitted to impinge upon the plate, the needles are deflected. Thus, light being the initiatory force, we get chemical action on the plate, electricity circulating through the wires, magnetism in the coil, heat in the helix, and motion in the needles."

These views of correlation have been and will be met with the charge of materialism, as if it were claimed that the mystery of life had been solved. Surrounding all human knowledge and above all human speculation, there still remains the inscrutable initial force, which no experimental philosophy can reach or harm. We only claim to understand a little better the few phenomena presented in our daily lives; to have simplified and connected them more intimately and indissolubly with the great central cause, which is as far as ever above our comprehension. We only approach nearer to that

> "Truth which draws
> Through all things upward; that a twofold world
> Must go to a perfect cosmos. Natural things
> And spiritual—who separates those two
> In art, in morals, or the social drift,
> Tears up the bond of nature and brings death.
> * * * * * * *
> Without the spiritual, observe,
> The natural's impossible; no form,
> No motion! Without sensuous, spiritual
> Is inappreciable; no beauty or power!
> And in this twofold sphere the twofold man
> Holds firmly by the natural, to reach
> The spiritual beyond it—fires still
> The type with mortal vision, to pierce through,
> With eyes immortal, to the antetype
> Some call the ideal—better called the real,
> And certain to be called so presently,
> When things shall have their names."

It is necessary to speak thus strongly upon this point, as the unreasonable fears of some may be still more excited by the assertion that

the same law of correlation binds together man and the different forces of nature.

Vital phenomena have generally been regarded as something entirely distinct from physical. Without directly asserting it, much of the common language of the day seems to imply a change of plan in connection with humanity, while all the teachings of physiology show the opposite. As no language of mine can present the facts as well, I will quote the words of another.

* * * "As a creature of organic nutrition, borrowing matter and force from the outward world; as a being of feeling and sensibility, of intellectual power and multiform activities, man must be regarded as amenable to the great law that forces are convertible and indestructible.

"The forces manifested in the living system are of the most varied and unlike character—mechanical, thermal, luminous, electric, chemical, nervous, sensory, emotional and intellectual. That these forces are perfectly coördinated, that the relation is of the same nature as that which is found to exist among the purely physical forces and which is expressed by the term correlation, seems also abundantly evident.

"If a current of electricity is passed through a small wire it produces heat, while if heat is applied to a certain combination of metals it reproduces a current of electricity; these forces are therefore correlated. A current of electricity passed through a small portion of a motor or sensory nerve, will excite the nerve-force in the remainder, while, on the other hand, as shown in the case of the torpedo, the nerve-force may generate electricity. Nerve-force may produce heat, light, electricity, and, as we constantly experience, mechanical power, and these, in their turn, may also excite nerve-force. This form of energy is therefore clearly entitled to a place in the order of correlated agencies. * * * * Moreover, sensations do not terminate in themselves, or come to nothing; they produce certain correlated and equivalent effects. The feelings of light, heat, sound, odor, taste, pressure, are immediately followed by physiological effects, as secretion, muscular action, &c.

"How the metamorphosis takes place—how a force existing as motion, heat or light, can become a mode of consciousness—how it is possible for aërial vibrations to generate the sensation we call sound, or for the forces liberated by chemical changes in the brain to give rise to emotion, these are mysteries which it is impossible to fathom. But they are not profounder mysteries than the transformation of the physical forces into each other. They are not more completely beyond our comprehension than the nature of mind and matter. They have simply the same insolubility as all other ultimate questions."

This connection being established, it remains for us to show that something of the same correlation exists between healthy and mor-

bid phenomena; that the two are, at least, so intimately connected as to make an absolute separation impossible. If the proof be less complete, it must be remembered that the problem is more complex —the difficulties attending even physiological inquiry are infinitely increased. The elements are not so fixed; we have not such constant quantities to deal with.

All the varied phenomena of life are but different expressions of vitality; the most common, combined in such a way as to secure the great aim for which man was created, we call health; deviations from this, disease. The difference is precisely the same as that which exists between harmony and discord. But health itself is a relative term, signifying a proper adjustment to surrounding things. This is obvious to all in connection with climate. The health of an individual in any given locality is a part of that locality. If the body may claim the soil, atmosphere, &c., they may claim it, and a change shows how strong the grasp may be. The most robust of northern birth and breeding find debility, disease, and even death in a southern clime, unless adjusted to the new conditions, when the old strength and activity return. Health is restored, but it cannot be precisely the same thing as before. With different elements, we have the same result, and, on the other hand, with the same agent we have different results; that which for a time disturbed the whole economy, finally brings vigor and complete restoration. The common expression that an invalid is seeking health is full of the deepest truth, and if we understood the play of affinities better, we might assign to each his proper place, were it not a question of more than climate, temperature or food. Man's nicest relations are established through his nervous system, his emotions and intellect. The home, the social circle, the occupation, all furnish innumerable causes of variation, into which we can get no insight, and over which we may have no control. But to these difficulties there is added another equally great—the impossibility of subjecting human beings to that nice experimentation, by which laws in the physical world are fixed. We would not, if we could, carry experiments upon human suffering farther than each man in his blindness carries them for us. We have too much respect for life to attempt the solution of problems without regard to the consequences; we are at once checked by the possibility of doing harm. Our facts must generally be gathered in a desultory manner, seized only when they offer themselves. But by patient watching much has been gained. The observation of symptoms during life and the application of scientific methods of research after death, have so far disclosed the truth that we now stand upon a firm basis, and may justly claim our true position by the side of other sciences.

Though facts have been for a long time accumulating, it is by no means yet recognized how great a change has taken place in the fundamental principles of medicine. In obtaining these results the

same natural and inevitable mode of inquiry has been pursued as in the investigation of other branches of knowledge, and has been characterized by the same errors—defective observation and, therefore, necessarily false generalization; or false deductions from true premises. The tendency to classify and reduce to systems has been in advance of rigorous investigation, and has, at times, taken the place of it. In the study of nature the concrete must precede the abstract, and it is only when our knowledge has become very extensive and complete that we can combine facts in such a way as to facilitate a more complete comprehension of them. A still greater perfection is required for the attainment of that highest insight which teaches us the proper relation of things. To the partially cultivated mind variety is the most obvious characteristic of matter. The earliest efforts are devoted to the establishment of distinctions and erecting boundaries; but knowledge being deficient, the merest accidents are, perhaps, followed as guides, and progress is only retarded. Such has been the course in medicine; the search has always been for lines of separation, absolute boundaries between health and disease, and between the different varieties of disease. These have changed with the prevailing opinion of the time; many errors have been discovered and abandoned, but the great fundamental error of all was persisted in until more accurate means of investigation and more rigorous observation disclosed the great truth, that there exists a close relationship not only between health and disease, but also between many of the expressions and forms of disease, as well as between healthy and morbid textural changes. Although there are facts which appear to show a similar correlation and convertibility as in the instances previously cited, we shall only introduce here evidence of close relationship.

Guided by the most obvious external manifestations, we may convince ourselves that by insensible gradations health and disease merge into each other. No one who has observed the infinite number of indications of disease, can fail to realize the impossibility of distinguishing absolutely between many of them and those of health; and where most marked so as to constitute symptoms or even signs, they are exaggerations or perversions of healthy action.

The vagaries of the human mind furnish a most prolific field of inquiry. Many efforts have been made to define insanity, and distinguish it absolutely from its opposite, but without success. If sanity be anything it is that nice adjustment of the mental faculties of each individual which preserves them in their proper relation to external things. Yet, if we attempt to apply this rule, who shall escape condemnation? We must neglect the more delicate impairments of this adjustment if we would come to any practical decision, but we need not deny their existence.

Sensation must be accepted as an inexplicable phenomenon. Will

any one undertake to prove that pain is something entirely distinct from it? They are as intimately allied as motion, heat and light.

The same may be said of all the special senses, not only in their normal manifestations, but in the exaggerations and perversions which are decidedly morbid.

The history of intermittent fever exhibits in the most striking manner not only the unseen and subtle cords that bind man to the external world, but the close connection between health and disease.

There are many spots upon the surface of the globe which, during certain seasons of the year, furnish salubrious dwelling places for man. But the simple addition of the heat which attends the lengthening days converts these localities into sources of disease and death. The human system responds with strange fluctuations of heat, cold and muscular contractions, even when removed to a distance. And yet no new agent can be detected. The changes are as mysterious as those which attend the evolutions of heat, light or electricity. Health and disease alternate with a regularity as great as that which characterizes the swing of the pendulum.

What we have seen here in a connected chain is true of other affections in which no textural changes have taken place. They are all characterized either by modifications of the ordinary functions, or are dependent upon changes which are themselves exaggerations or slight modifications connected with the general laws of growth and decay.

The relation of disease and health is still more strongly shown in the various textural changes which have now been fully investigated by means of the microscope. Many processes, which formerly received distinct names or were attributed to different causes, are found not only to be similar, but to resemble so closely the natural ones as to be hardly, or not at all, distinguished from them.

The ideas prevalent a few years since, and still maintained by some, in regard to the character of new formations, are no longer tenable. An accurate knowledge of their structure has shown that almost all of them are the result of excessive nutrition, or of the substitution of tissues in themselves normal, though out of place where found. There seems, as it were, to be a persistence of that generative force which secures the differentiation of the apparently homogeneous elements of the single cell. The same wonderful transformation is seen in the growth of the vegetable seed, or that of the animal ovum. Under the action of light, heat and moisture, the first is developed into the most various and beautiful structures. With the nourishment derived from these last, the simple animal germ subdivides, and in subdividing changes, until all the complicated organs of the body are formed, though sometimes with strange variations at an earlier or later period of fœtal life. But there seems also to linger in the different parts of the completed organism some remnant of the old power. This manifests itself in a deviation

from the ordinary mode of growth. It may be shown in increased action and nutrition, through which hypertrophies arise. The elements increase in size or number, until a visible enlargement of a part takes place. Nutrition and hypertrophy are merged in each other. Again, certain tissues, in themselves normal, appear in parts where they do not naturally belong; one cell may be substituted for another, cells for fibres, or fibres for cells. Many of the common textural changes which constitute disease arise in this way.

These different materials may accumulate at certain points and form outgrowths or tumors. All the primitive tissues are represented—epithelium, fibre, fat, cartilage, bone and bloodvessels. Glandular structure is imitated, and nerve-tubes may be reproduced when divided.

Even in cases where none of the permanent tissues are clearly made out, the products may be such as belong to a primitive stage of development—as in the elements found in the so-called fibro-plastic growths; or are only slight variations from the normal type, with characters so little expressed as to render the application of any special term useless. Cancer itself contains no constant nor absolutely characteristic element, though that most commonly found deviates so much from the greater part of the tissues that we readily detect it.

It does not seem out of place here to suggest, at least, that the extraordinary appearance of fœtal structures, or portions of a fœtus, in various parts of the body, may be only a still higher manifestation of this reserved generative power.

If we compare the numerous terms formerly and still applied to tumors, with those substituted by the more accurate knowledge of the present day, we see, instead of the strange nomenclature, founded upon certain accidents of form, resemblance or position, a thoroughly scientific, and therefore simplified language, which not only expresses the true nature of growths, but brings them all within a general law.

A change quite as great and important has taken place in the views of inflammation. The obscurity which was fast accumulating with the multiplication of treatises upon the subject, has at last been dispelled by the discovery that the phenomena are of the simplest kind, and closely allied to those of health. Such a result was impossible as long as the older views prevailed, accidents were regarded as essentials, and all the changes were studied as new and special manifestations, entirely unconnected with normal life. The bloodvessels were supposed to play so important a part, that it was thought impossible for non-vascular tissues to inflame. A great obstacle to the acquirement of correct views upon these points has been the complexity of animal structures, and this would ever have been a barrier, had it not been recognized that nature's operations were conducted on a general plan, only modified for special purposes; that

the structure and action of plants represent, to a certain extent, those of animals; that the simpler tissues obey the same laws as the more complex, although the conditions upon which these laws act are somewhat changed. Plants, though unprovided with nerves or bloodvessels, show a power of resisting, yielding to and repairing injury, precisely the same as that seen in the most delicate parts of the human organism. Experiments have shown that the most characteristic phenomena of inflammation are but repetitions of what is observed in vegetable structures. If one of the latter is wounded or irritated, its formative activity is excited, and there arise many new elements closely resembling the old. So in the most unequivocal, advanced and destructive stage of inflammation, in those parts of the human body unprovided with bloodvessels, as in cartilage, the existing nuclei subdivide and furnish elements which cannot be distinguished from the white corpuscles of the blood. In vascular parts the same elements are formed, and in forming create a demand for nutrient materials, which is answered through the increased supply of blood; serum or fibrin may also accumulate, and we have swelling; an increase of heat naturally follows, and the nervous system takes cognizance of the change in the form of pain.

This same process has only to be repeated near some surface, and an ulcer is formed. The tissues, which usually constitute the outer layer and protect the internal parts, become the seat of a similar development of nuclei, which multiply until they have taken the place of the firmer elements, and give the characteristic moist, denuded appearance.

Caries of a bone differs in no respect from the last, except that it is deep seated and involves a harder texture, which the soft new formation gradually displaces and then itself decays.

On the return of healthy action the multiplication of elements ceases; those already formed are either discharged externally or absorbed, and, if the disease have not progressed too far, the part returns to its former condition. If this be impossible, fibrous tissue is generally substituted and a cicatrix remains.

All of these changes take place constantly, without the interposition of art, and appear to be as much connected with each other as are motion, heat and light. The ultimate change is only growth.

The old views of pyæmia are no longer tenable, inasmuch as it has been shown that pus-corpuscles cannot be distinguished from the white corpuscles of the blood; that they cannot be absorbed as such through any unbroken vessel; that, when pure and fresh, they may be injected into the circulation without injury. Whether the numerous abscesses be excited by an invisible, deleterious material which has in some way entered the blood; or be formed in the parts where found, in the same manner as at an isolated point, the anatomical change is precisely the same as that which takes place under ordinary circumstances. The only question is about the cause, and

this is one which may still be raised about many other vital as well as physical phenomena.

The researches upon no single subject show a greater complexity of error than those upon scrofula. The term itself is so indefinite that we may, perhaps, pardon its very liberal application to affections which have neither a common origin nor perceptible resemblance. The diversity of opinion in regard to it has been such, that it is extremely difficult, if not impossible, to assign it a proper place in modern science. It may with truth be said that after applying to the various changes described in the nomenclature of the present day, we have nothing left, which, anatomically, needs the special designation of scrofula. Some may still require it to use as the chemist does the expression extractive matter, to cover a residue of which nothing is known. If it be a term too convenient to be abandoned, it must be reserved for a class of transformations which imply a marked tendency to decay, though the latter may be preceded by a feeble but exuberant growth.

The older writers have been equally in the dark in regard to tubercle. When they undertook to distinguish it from scrofula, it was described as a soft, round, yellow product, and everything which possessed these characters at once received the name. Finally, with the aid of the microscope, the so-called tubercle-corpuscle was discovered, and announced as characteristic of this affection, but this claim, like those which had preceded it, was based upon accident only, and, being abandoned, nothing characteristic is left. When tubercle is recognized as a distinct disease it is generally owing to the existence of peculiarities which result from degeneration, of the same kind as that which affects all other tissues. In using the term we must take into consideration every circumstance in a given case, the preceding history, the amount of the product, its seat and accompaniments. Otherwise we shall not find a safe guide, even in the definition of Rokitansky, "that it is characterized by the absence of a capacity for high development and tendency to decay, with consecutive destruction of the tissues."

Degeneration, as we have seen, plays an important part in both of these processes, and the common form of it, the fatty, is itself a beautiful example of the manner in which nature uses the same element for the production of life or death.

We have fat as a natural, permanent tissue, widely diffused throughout the body; we find it as a nutritive element in the lacteals after meals; in the mammary gland, it gradually fills the cells and destroys them, but, in doing so, furnishes an important part of the nourishment of the new being. By its agency are removed certain parts, which are no longer of use, as the corpus luteum. All these changes are conservative. But the same product may so accumulate in its usual seat as to become a burden, may be heaped up in the form of a tumor, or may be substituted for tissues, upon the integrity

of which life itself depends. With the recognition of this simple law, the troublesome colostrum, inflammation corpuscles, granulation cells, &c. &c., melt away.

I will cite one other example of unnecessary amplification, arising from faulty methods of investigation, and persisted in, even after the light of true research has shown that the multiplication of classes and varieties only serves as a veil to hide the truth. The skin, being always exposed to our observation, has been the object of a more critical examination than is possible with the internal organs. An attempt has been made to catalogue all the changes which take place, until the nomenclature has outgrown the capacities and patience of most physicians, and yet the vocabulary is incomplete, and must remain so as long as it is based upon every conceivable accident of disease. The variations are infinite, and therefore we are constantly meeting with cases which deviate more or less from any recorded observation. It does not seem to be recognized that diseases here obey the same laws as in other parts of the body, and are attributable to the same few and simple changes.

Having shown that the old terms fail to convey an idea of the present state of knowledge, the question of substituting others arises. Some, which never meant anything and have been used to explain everything, may well be given up. Others may safely be left to time; they will fall as surely as unsound fruit. Our knowledge is still too limited to furnish a permanent language, for it might again be based upon accidents instead of fundamental truth. As we must have signs, symbols or formulæ for the expression of our ideas, many of the old ones will still answer the purpose, if we only apply them with the new meaning. It is useless to quarrel about words, if we only understand things. However unmeaning the symbols may be, our unknown quantities will appear with as much certainty as in algebra, if we calculate the problem correctly.

It is unnecessary to give further examples of the close relation existing between health and disease. Enough has been said to warrant the claim made at the commencement, viz., that the advancement in medicine is commensurate with that in other branches of science. We have reached this point by discarding vicious methods of investigation, by following the paths which alone can lead to success; by seeking our knowledge at nature's feet.

The necessity of understanding the action of the healthy organism has always been recognized. Anatomy, physiology, chemistry and other fundamental branches have been regarded as essential for an introduction to the study of disease. But they should serve as something more than an introduction or foundation. It seems too often as if, like other foundations, they were intended merely to be buried up and forgotten, or, what is worse, as they lie beneath ordinary scrutiny, too little care is often bestowed upon them, and, the examination for a degree passed, they are forever neglected.

Such neglect is fatal. It is not strange that every part of the superstructure should soon begin to show signs of haste and incompleteness, which every year renders more painfully obvious. It must be more fully recognized that the connection between disease and health is too intimate to permit a correct comprehension of the first without a living, growing knowledge of the last. Had we more of this we should hear fewer complaints of the inefficacy and unsatisfactory nature of our art. The censure often heaped upon medical science belongs not to it, but to its counterfeits which many apply in its stead, such as ignorance, the poor weaknesses of human nature, the shallow tricks which attract those who cannot know the truth. It is the equipage, the dress, the manner, the prejudice of the time that are applied. If these fail, do not blame a science which has been neither understood, appreciated nor used. Let the false image bear its own sins.

The science of medicine is in advance of the art. Its unquestioned principles, already ascertained, are not yet applied. I allude to this as a warning, not as a reproach. In what department of human life has there been a complete application of all known truth? The failure in this respect arises partly from ignorance, partly from a disinclination to change; to a conservative spirit, which influences more or less the majority of mankind.

That the above assertion is warranted, is shown by the frequent evidence of looseness in diagnosis, although it is demonstrated that in the vast majority of instances we can, at least, make ourselves acquainted with the nature of any given case, if we will only use the means at our disposal. But this implies as nice a calculation and balancing of many points as any legal inquiry. Although the external manifestations of disease involve the use of but few elements, these are combined in such an intricate manner, and exhibited in such various degrees, that the closest scrutiny is necessary to guard us against the misinterpretation of their meaning. Pathognomonic signs are few, but each disease has its own mode of expression, though it may not be detected at a glance, and time may be needed for its complete development. It is too often the case that, instead of a careful weighing of evidence and basing an opinion upon the result, we have a rough guess or a kind of dead reckoning. If the sailor cannot or will not use his quadrant and logarithms, is nautical science to be blamed for a long voyage, with an unfortunate termination?

Will it be claimed that the therapeutic art has kept pace with the developments of science? The very fears expressed by some at the scepticism of the day, in relation to drugs, would seem to prove the contrary. The application of remedies to human suffering implies something more than the use of the medical dictionary and the volume of three thousand prescriptions. If our relations to the external world are as manifold as we believe, there can be no lack of

opportunities for giving aid, even if drugs should be altogether dispensed with. But the last is impossible; we know that much may be done with them, and if the study of their effects be pursued in the same scientific manner as that already inaugurated, the future is full of hope. As natural agents they must hold their proper place, but cannot exclude other agents.

You need not fear through such investigations any loss of power. Has anything been lost by the discovery that many diseases are self-limited, have a natural period of development and decline, which no human agency can prolong more than it can the blooming of the flower; though something worse may be added by unwise interference. The more you study the mysteries of nature, the deeper you penetrate, the more will it be seen that your power is limited in certain directions. But do not talk of power lost, it was only wasted before. The greatest available force is derived from the observation of laws and the strictest obedience to them. Every error exposed, although it may for a time leave you helpless before the truth, gives a firmer ground upon which to stand. You must follow nature; you cannot coerce her. But the history of man's connection with natural forces shows that while any law is indestructible, its operation may be changed by the application of other laws, or you may shield yourself from its injurious action; you cannot destroy it. This seems to be sometimes forgotten in man's struggle for preëminence and originality.

But, however clearly we may comprehend the relations of physical or vital forces, we are no nearer than before to the acquisition of an all-embracing system of treatment. "Systems," says old Malpighi, "are ideal and mutable; observation and experience are solid and unchangeable." Has not time fully confirmed the saying? Has not the forming of systems now been given over to the shallow, superficial observer, who collects a few disjointed, accidental phenomena and makes of them a key to problems which the highest intelligence, after deepest research, can only gaze upon with wonder and awe? Not one of the many branches of knowledge which come within the province of the physician has yet been reduced to an immutable system, and yet it is claimed that something is discovered which controls them all. We laugh at the old alchemist for his fruitless labors in search of the philosopher's stone; how much more should we heap contempt upon his modern representatives, who, ignorant of the intricacy of the problem of life, actually assert the power of transmuting all disease into health, and claim the latter, when acquired, as the sole result of their labors.

> "A fool will pass for such through one mistake,
> While a philosopher will pass for such
> Through said mistakes being ventured in the gross
> And heaped up to a system."

Such is the favorite weapon of the charlatan. Sangrado, who has

so often been cited as a warning to the bloodthirsty practitioner, embodies a much broader idea. He is the typical system-monger. The majority of people being incapable of understanding or appreciating scientific truths, grasp greedily at some formula, which their limited knowledge and narrow experience persuade them they understand. Their views must be in some way circumscribed, for they do not realize that the horizon recedes as we ascend.

But the absence of a system does not imply a want of principles. If we lacked these we should have but little left. It is intended to insist most strongly upon their existence and their application, for they are truly practical. I do not forget that, however interesting and valuable scientific research may be, the application of its results to mankind is what particularly concerns you. Every truth, however small, belongs to pure science; but some few only, perhaps, have that apparent connection with our daily wants which makes them especially useful to us. These we must select as far as possible, but never lose sight of their bearings and relations. It is the narrow, exclusive view of single, perhaps accidental points, that makes bigots of us all. Remember that the practical lies in the root and branch as well as in the fruit. If you would gather the last, guard well the first.

While you repudiate absolutely all titles which imply a belief in any special dogma, you have good reason to be proud of your connection with that school which some call "old," and which is so, inasmuch as it represents the accumulated wisdom of ages, now seen more clearly and developed more rapidly than ever before. It is the old school of nature, old because true, and therefore ever young. It is a part of time and moves with it. If some old errors still linger, it is not in medicine alone that this is seen. Natural laws are equally overlooked in other callings. It is not many months since the assembled intelligence of the nation at Washington imitated the wisdom of the thirteenth century, and attempted to regulate the price of gold by statute; and even more recently the head of the oldest, and, as it is claimed, infallible branch of the Christian church issued an Encyclical Letter, which shows that the dark ages never existed or that we live in them now.

If you would elevate the profession still higher, be ready to receive every new truth, whatever its source may be. If there be danger from the too ready acceptance of new views, that arising from a rigid conservatism is equally great. Your whole spirit may be so affected as to become as useless as the compass warped by the iron hull that bears it.

If we have not misrepresented the present position of medical science, it is certainly worthy of being adopted as a profession, but everything depends upon the spirit with which you cultivate it. The words addressed by Ruskin to the students of art are most applicable here. "Remember, therefore, always you have two characters

in which all greatness of art consists :—First, the earnest and intense seizing of natural facts; then the ordering those facts by strength of human intellect, so as to make them, for all who look upon them, to the utmost serviceable, memorable and beautiful. * * * * But once quit hold of this living stem * * * * and there is but one word for you—Death: death of every healthy faculty, and of every noble intelligence, incapacity of understanding one great work that man has ever done, or of doing anything that it shall be helpful for him to behold. You have cut yourselves off voluntarily, presumptuously, insolently, from the whole teaching of your Maker in His universe; you have cut yourselves off from it, not because you were forced to mechanical labor for your bread, not because your fate had appointed you to wear away your life in walled chambers, or dig your life out of dusty furrows; but, when your whole profession, your whole occupation—all the necessities and chances of your existence—led you straight to the feet of the great Teacher, and thrust you into the treasury of this work; when you have nothing to do but to live by gazing, and to grow by wondering; wilfully you bind up your eyes from the splendor—wilfully bind up your life-blood from its beating—wilfully turn your backs upon all the majesties of Omnipotence—wilfully snatch your hands from all the aid of love. And what can remain for you but helplessness and blindness, except the worse fate than the being blind yourselves—that of becoming leaders of the blind.

ENUCLEATION OF *RIGHT* EYE ON ACCOUNT OF THREATENED SYMPATHETIC AFFECTION OF LEFT.—EXTENSIVE BONY DEPOSITS IN CHOROID.

[Read before the Boston Society for Medical Improvement, and communicated for the Boston Medical and Surgical Journal.]

By Hasket Derby, M.D., Boston.

Mr. C., aged 39, consulted me June 6th, 1863. When six years of age, his right eye was wounded by several splinters of glass which flew from a piece he was pounding with a hammer. A severe inflammation ensued, followed by total loss of vision on that side. Since then, however, he had suffered no pain or discomfort in the eye, and now only visited me on account of a mouche volante before and slight asthenopia of the left eye, inability to support its continued use.

I found the right eye somewhat atrophied, the cornea nearly opaque, the iris, as far as could be seen, in contact with the cornea, its tissue being entirely degenerated. Beyond a full condition of the vessels of the conjunctiva bulbi, I noticed no evidences of existing irritation or inflammation. The *left* eye was slightly myopic, but throughout normal.

Finding that the patient had been over-using his eye of late, I simply advised a stimulant application and a short vacation. He took a journey, and on his return the difficulty had entirely disappeared.

Oct. 12th of the present year he again presented himself. He had experienced no trouble till within three months, since when the *right* bulb had been through several inflammatory attacks, which were accompanied by some pain and sensitiveness to the touch of this eye, and intolerance of light on the part of the sound one. I found, on examination of the right eye, that the conjunctiva was markedly injected, the vessels unusually full, and that there was some ciliary redness around the cornea. The other eye was somewhat injected, but beyond a certain degree of intolerance of light, gave no indication of the presence of any active sympathetic affection.

The patient had already been advised to submit to the removal of the anterior portion of the eye. As far as cosmetic considerations were to be regarded, this plan offered decided advantages over any other, for a better and more movable cushion for the artificial eye to be subsequently worn would thus be afforded. But such an operation would not guard against future sympathetic inflammation of the sound eye from irritation proceeding from the stump thus left behind. This would be particularly apt to be the case if bony concretions had formed within the ball, and the length of time that had elapsed since the reception of the injury rendered this particularly probable. On pointing this out to the patient, he at once acquiesced in the operation of enucleation, which was accordingly performed Oct. 14th. Recovery, as usual, was rapid.

For the account of the examination of the enucleated eye, and for the preparation of the specimen, I am indebted to Dr. Miller, who furnishes this account.

"The eye was atrophied, being reduced about one quarter. The sclerotic was normal in appearance, but somewhat thickened.

"The cornea was grayish in color, nearly opaque, diminished in size and flattened.

"In place of the crystalline was an irregular, grayish-white mass of small size, easily breaking down between the fingers, and gritty to the touch.

"The iris was disorganized so as to be hardly recognized.

"The place of the choroid seemed to be wholly occupied by a bony concretion of extraordinary size. Its shape and general configuration seemed to indicate that the entire choroid, up to the ciliary border of the iris, had disappeared before this bony growth, which, deposited on its elastic membrane, had accurately copied its form. The markings of the venæ vorticosæ were distinct on its outer surface.

"The place of the vitreous was occupied by a brownish fluid."

ACCIDENTAL PHYMOSIS, WITH HYDROCELE.

Under the Care of I. G. Braman, M.D., of Brighton, Mass.

[Communicated for the Boston Medical and Surgical Journal.]

August 29th. A. C., æt. 18, of strumous diathesis, presented himself, laboring under a phymosis of some two weeks' standing. The prepuce was enormously swollen and invaginated. An oiled catheter was with great difficulty introduced, and showed considerable adhesion. There was also hydrocele of the right tunica vaginalis, as shown by swelling, fluctuation, transmission of light and absence of pain. The patient ascribed it to a strain two years previously. There was no probability of any complication with gonorrhœa.

A lotion was ordered for the prepuce, of sugar of lead and tincture of opium, and the patient was directed to drink freely of flaxseed tea, and live upon the simplest food.

Aug. 30th.—Applied six leeches, and freely scarified the parts.

31st.—Less inflammation; swelling slightly reduced. Found it still impossible to retract the prepuce. The idea of introducing *sponge tents* presented itself, and this was, with considerable difficulty and much discomfort to the patient, effected. Leeches were again applied. A catheter (female) was supplied to aid in urinating. This he was directed to oil and pass around the glans penis as far as possible twice a day.

September.—Consented to an operation, but when all arrangements were completed his courage failed him, and a further delay was demanded. The following was ordered:—℞. Potass. iodid., ʒ i.; ext. taraxaci fl., ext. rumicis fl., āā f ʒ ij.; ext. stilingiæ fl., f ʒ ss.; syr. aurant. cort., f ʒ iv.; aquæ, f ʒ viii. M. Cap. f ʒ ss. ante cibum. Dilute tincture of iodine to be applied to the testicle.

10th.—Great improvement. Could retract the prepuce almost to the corona. Continue lead and opium, and gradually introduce larger tents.

22d.—Inflammation and swelling of prepuce entirely subsided; could pass and re-pass the corona with perfect facility. Patient considers himself well in this respect. Gain but little on the hydrocele. The seton will probably be required, but the patient wishes to try palliative measures somewhat longer. General health excellent.

In 1863, the latest year for which returns have been issued, the birth-rate was 3·539 per cent. in England, 2·686 in France, 3·988 in Austria, 3·912 in Italy. The marriage-rate (persons married) was 1·688 per cent. in England, 1·600 in France, 1·734 in Austria, 1·626 in Italy. The death-rate was 2·305 per cent. in England, 2·244 in France, 3·110 in Austria, 3·115 in Italy. Commonly the mortality is higher in France than in England.—*Lancet.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, NOVEMBER 9, 1865.

Introductory at the Massachusetts Medical College.—The annual course of lectures in the Medical Department of Harvard University was opened on Wednesday, Nov. 1st, with an address by Dr. Ellis, Adjunct Professor of Clinical Medicine. The audience, of which a large number were physicians, more than filled the lecture hall, among whom, occupying a seat by the side of the President, was the most venerable and revered of the profession, the oldest living professor of the University, Dr. James Jackson. The address was listened to with marked attention throughout, and received at its close warm manifestations of approval. It will be found entire in the present number of the Journal, and our readers will be able to form their own opinion of its merits. The subject is one of great interest to the profession, and is, we think, both fairly and ably treated by the lecturer.

Accepting at the start the proposition that man is as much subject to the physical laws of the Universe as any other combination of created matter, whether animate or inanimate, and that they, modified only by the influence of individual vitality, are sufficient to account for the most mysterious phenomena of life, it will be seen how readily slight changes in their mutual relations may give rise to those new manifestations of vital action which we call disease. The object of the writer was to show how close is the relationship between these two states, health and disease, even in their effects or visible phenomena, and how needless it is to recognize the necessity of any special or new law to explain the existence of the latter. The laws of nature are fixed and absolute, and cannot be arrested even for a moment; the so-called laws of disease are not divine laws, they are merely phenomena which are in many cases produced by human agency, and which may as certainly in others be arrested at will. Some of them may even be annihilated. They, like sin, which is an interruption or disease of man's moral nature, are permitted as possibilities in human existence. Sulphuric acid applied to a board produces chemical changes which we call charring, applied to the surface of a man the same destructive results follow, but others also; we bring into existence, in some cases, a disease which we call keloid. The difference is due, in the latter experiment, to vitality. We have only modified in some manner the natural condition of healthy life. Similar phenomena follow the reception of poisons, animal or vegetable, animate or inanimate, material or invisible, whether by inhalation, inoculation or ingestion within our economy, and these results are tangible and are called disease. The fact of self-limitation in disease is no indication of any peculiarity in its origin. The destructive and reparative processes set at work by man's voluntary agency, either within the cavities of the body or upon its surface, may be as much self-limited and as invariable in their course as pneumonia. The peculiarity does not belong to the disease, it is a part of the vital agent it affects.

Science is slowly transferring to the category of diseases produced

by man's direct or indirect, but free-will agency, affections which we have been in the habit of considering especially manifestations of divine agency, because so inscrutable. Now that we can explain the trichina pestilence and recognize the existence of bacteridia in malignant pustule, and vegetable organisms in some forms of the exanthemata, who can object to our unshaken faith that the future of medicine will be rendered glorious, and that light will be thrown into more dark mysteries, which we now accept as ordained evils, by many such discoveries? Need we express also our conviction, equally firm, that with this light will come both the power of turning such interpretations to man's preservation, and an enlarged knowledge of means to cure.

We have been led farther in this direction than the lecturer chose to go, but no farther, we are sure, than the thoughts of most of our readers have travelled of late. Let us receive kindly, however, and consider fairly, whatever any of our professional brethren may offer us upon this and all subjects, however widely we may differ from them. Science was never harmed by agitation, but grows upon it.

The lecture season opens with every prospect of a very full class, and although the illness of Dr. Séquard is a serious temporary loss to the Medical School and to science amongst us, the students will find in the new Assistant Professor of Theory and Practice a valuable acquisition to the advantages hitherto offered them.

Now that the cholera has been brought on shipboard to New York, the *Daily Advertiser*, which, in spite of the opinions expressed by physicians, has stated that Boston was the best-drained city of the country, no longer upholds the culpable delay of the city government, and very properly asks what it proposes to *do* with the sunken Church-Street district. Such an attempt at self-whitewashing as the resolutions adopted at City Hall last week is almost unparalleled even in the records of municipal government. Now that our most influential public journal has recognized the existence of this most dangerous evil, we trust it will not let the matter drop until public opinion forces the city to correct it.

Dr. Samuel A. Green, recently returned from an absence of more than four years in the army, has been appointed Superintendent of the Boston Dispensary.

Massachusetts College of Pharmacy.—At a special meeting of the Board of Trustees, held Oct. 1st, a committee was chosen to confer with the State Constable in regard to his late order closing the apothecaries' stores on Sunday. The committee attended to their duty, and at the regular meeting of the Board, Nov. 1st, made a report of their doings, which was accepted, and ordered to be placed on file; after which the following resolutions were offered and adopted:—

Resolved, That we believe the observance of the Sabbath as a day of rest from labor to be a Divine institution, appointed by God for the good of man; that it is alike binding upon us by the laws of God, the laws of man and the good of society; that for these reasons it is both our duty and inclination to observe it strictly, so far as is practicable to the necessities of society as at present organized.

Resolved, That by reason of the necessity for dispensing of medicines, and the furnishing of many other articles, to those whose necessities absolutely require them of us on the Sabbath, we have been obliged to conform to the custom of keeping our stores open at all times, as well Sundays as in the night, to be ready to dispense these articles of necessity.

Resolved, That by reason of our stores being so opened for the convenience of those whose wants are imperative, a custom has grown up in the community of calling upon the apothecaries for many articles not of prime necessity, which could be as well obtained the day before or the day after the Sabbath; that although we do not labor as upon other days, yet the mere selling of those articles has caused a portion of the public to regard us in the light of Sabbath-breakers, classed with barbers, restaurant-keepers and bar-tenders; that the most conscientious observers of law, order and propriety do not hesitate to call upon us, in violation of the Sabbath and the laws of the Commonwealth, to furnish them with medicinal liquors, stationery, mineral waters, palliative confections, dietetics, cosmetics, and many other articles, all of which, in many cases, are of prime necessity *at the time*, and which would be a violation of the laws of charity and mercy to deny upon the Sabbath.

Resolved, That in view of the difficulty of defining what are and what are not articles of charity and necessity, without inquiring too particularly into the motives of others; the mortification we experience in denying our customers and friends what seems to them a reasonable request; the expense of keeping the store provided with the same talent, heat, light, and other conveniences as upon other days; the dubious position we hold in the eyes of our best and most conscientious citizens, *until they* wish to be accommodated; the deprivations of the benefits and blessings of the Sabbath to ourselves and assistants; all render it more to our profit and advantage to close our places of business on the Sabbath.

Resolved, That in view of all these facts, we are unable to draw any line for the guidance of apothecaries, and powerless to recommend any articles or class of articles that may or may not be legally sold on the Sabbath. Therefore, we can only recommend to each apothecary to judge for himself of each particular case, and dispense all articles of necessity agreeably to his best judgment, according to the language and intent of the law. A. P. Melzar, *Secretary*.

Can anybody tell us whether the College, by these resolutions, recommends the shops to be closed, or to conduct their business as heretofore?

Massachusetts Medical Benevolent Society.—The annual meeting of this Society was held on Thursday, Oct. 26th, at No. 12 Temple Place, the President, Dr. A. A. Gould, in the chair. The report of the Treasurer shows the receipts for the past year to be $988·85; investments, $853·40; amount deposited, $1,445·30; the income of the Society from assessments and investments is now about $450. The following is a list of officers chosen for the ensuing year:—*President*, Dr. A. A. Gould. *Vice President*, Dr. H. W. Williams. *Secretary*, Dr. A. D. Sinclair. *Treasurer*, Dr. Francis Minot. *Trustees*, Drs.

Luther Parks, Jr., of Boston, W. W. Wellington, of Cambridge, S. Salisbury, of Brookline, W. B. Morris, of Charlestown, C. E. Ware, C. G. Putnam, Calvin Ellis, of Boston, John W. Graves, of Chelsea, and Anson Hooker, of East Cambridge.

Railroad Accidents in Massachusetts.—In these days of frightful railroad accidents it is refreshing to read the following:—From the annual returns of the Directors of all the railroads in the State of Massachusetts, made to the Legislature, for the year ending Nov. 30, 1864, it appears that the whole number of passengers transported in the cars from Nov. 30, 1863, to Nov. 30, 1864, was eighteen million two hundred and six thousand and twenty-three (18,206,023), and of this vast number not a passenger in the cars was killed. Three persons in attempting to get on, and nine in passing from one car to another, or in jumping or falling off the platform while the trains were in motion, were killed or fatally injured. Thirty-one persons were killed during the year while lying or walking on the tracks.

Connecticut Valley Dental Association.—The annual meeting of the Connecticut Valley Dental Association recently took place in Springfield, sessions being held morning and afternoon. There was an attendance of more than forty members, representing Vermont, Connecticut and Massachusetts. The following officers for the ensuing year were elected:—*President*, Dr. J. Beals, of Greenfield. *Vice Presidents*, Dr. J. McManus, of Hartford, and Dr. O. F. Harris, of Worcester. *Secretary*, Dr. L. D. Shepard, of Salem. *Treasurer*, Dr. C. S. Hurlbut, of Springfield. *Executive Committee*, Drs. E. E. Crofoot, of Hartford, F. C. Buckland, of Manchester, and Ralph Morgan, of Chicopee. Essays were read by the retiring President, Dr. O. R. Post, of Brattleboro', Vt., and Drs. McManus, of Hartford, and Shepard, of Salem.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, November 4th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week	45	35	80
Ave. mortality of corresponding weeks for ten years, 1853—1863	36.5	35.5	72.0
Average corrected to increased population	00	00	78.52
Death of persons above 90		0	0

Pamphlets Received.—Report on the Use of Pressure in the treatment of Gonorrheal and Purulent Ophthalmia. By Surgeon Jos. S. Hildreth, U.S.V., in charge of Desmarres (U. S. Army) Eye and Ear Hospital, Chicago, Ill.

Married,—In Wenham, Oct. 25th, N. Alden Robbins, M.D., of Brooklyn, N. Y., to Miss Mary B. Kemble, of W.

Deaths in Boston for the week ending Saturday noon, November 4th, 80. Males, 45—Females 35. Accident, 3—anæmia, 1—apoplexy, 3—inflammation of the bowels, 1—congestion of the brain, 1—disease of the brain, 1—burns, 1—cancer, 1—cholera infantum, 3—consumption, 14—convulsions, 1—croup, 4—cyanosis, 2—diarrhœa, 1—diphtheria, 1—dropsy, 1—dropsy of the brain, 1—dysentery, 3—intermittent fever, 1—scarlet fever, 2—typhoid fever, 6—hæmorrhage, 1—disease of the heart, 2—hydrocele, 1—infantile disease, 5—inflammation of the lungs, 3—marasmus, 2—old age, 3—phlegmonous inflammation of leg, 1—pleurisy, 1—premature birth, 2—starvation, 1—unknown, 6.

Under 5 years of age, 34—between 5 and 20 years, 2—between 20 and 40 years, 16—between 40 and 60 years, 16—above 60 years, 12. Born in the United States, 50—Ireland, 18—other places, 12.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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PSORIASIS.

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BY JAMES C. WHITE, M.D.

THIS is a disease characterized by such marked peculiarities that it seems hardly possible that confusion should ever have arisen with regard to it, and yet we find that in consequence of the tendency which has prevailed among writers of all nations upon cutaneous diseases, both ancient and modern, to study their superficial appearances alone, without regard to their pathology, it has been not only confounded with other affections, but described as two distinct diseases, even down to the present day. Hippocrates and Galen seem to have used the term Psoriasis, in common with Lepra, Alphos and Lichen, to designate any squamous disease, although the Arabian physicians applied the former term to a much more serious affection. By Celsus it was called Impetigo. In the middle ages, and down to the days of Willan, it was customary to describe any particularly obstinate and extensive disease of the skin as a species of Lepra. That author, however, first recognized and described the real nature of the disease we are considering, although he committed the unfortunate error of dividing it into two separate affections, calling that form characterized by circular spots Lepra (in deference to the opinion of Paul of Ægina), and the other, in which the patches are of irregular shape, Psoriasis, to distinguish it from Scabies, to which the term Psora was also attached. It is evident, however, that under this last-named title he also included certain morbid conditions of the skin, which, although scaly, were in no way connected with the disease in question, such as the so-called Pityriasis rubra and chronic Eczema, and this mistake has led to endless confusion among nearly all dermatologists to this day. Among the French, Biett, Rayer, Cazenave, Gibert, and Devergie have accepted his nomenclature and treated of Psoriasis under two heads, although Alibert, and lately Hardy and Bazin, have maintained that the two diseases are one and the same, and that the word Lepra should be reserved for the frightful disease it first represented. In England, also, even in Willan's day, objection

was made to this arbitrary and unwarranted division, although the later writers, with few exceptions, have followed the same unphilosophical course. Wilson has hitherto adopted a similar classification, using the word Lepra to signify the pathological processes we are considering, and attaching a very indefinite meaning to the term Psoriasis, but still continuing to use it in this sense, although apparently convinced of the impropriety of so doing. In the preface to his last edition, however, which was evidently written after the volume was in press, and after he had fallen under the powerful personal influence of one who has always endeavored to simplify both the classification and treatment of skin diseases, and to whose teachings, also, I am largely indebted for the history and description of this affection, we find the following in relation to this subject, which is entirely at variance with the opinions expressed in the book itself:—

"Those who have honored me by perusing my writings and following my inquiries, may not have noted the difficulty which I have experienced in dealing with the word 'psoriasis.' To clear away, therefore, the confusion occasioned by the misuse of this term, I recommended its abolition, or, at the least, its application solely to the chronic eczema above noted. But it may very properly be asked, Why call eczema by any other name than its own? I can only answer, that I have done so heretofore in deference to authority, and to a widely-spread custom. Perhaps the moment has come, and I hope it has, when a better, and possibly the proper use of the term may be recognized.

"To return to Hebra. The term Lepra—*der Aussatz* in German—signifies *the* eruption, the great eruption. It is synonymous with Leprosy, *the* leprosy, the ancient leprosy, that which has since been called elephantiasis. Therefore let us bestow the term lepra where it rightfully belongs, or reject it altogether. The trivial affection which we at present call lepra has no single point of comparison with leprosy. We cannot but admit the truth of this argument, and we cannot, also, but recognize in an instant the monstrous absurdity of calling a comparatively insignificant disease by so portentous a name.

"Now, Hebra cuts the Gordian knot. Eczema he calls eczema; lepra, lepra; and that very common affection which we at present term lepra, he calls psoriasis. The change is simple, the reasons for it important. We cannot do better than adopt it. Moreover, it suits the spirit of the British bull-dog to call things by their proper names, and we are too noble in our nature not to recognize and value the intellect of our foreign brethren. The great International Exhibition of 1862 will not have existed in vain, if it have accomplished no more than to enable us to give the proper name to a very common and troublesome disease."

Within a few months, however, he has published a new work on skin diseases, called the "Student's Book of Cutaneous Medicine," in which he retains the name Psoriasis for a form of chronic Eczema, but calls Psoriasis, his former Lepra, Alphos.

The modern German dermatologists, as Fuchs, Simon and Bärensprung, have always insisted upon the unity of the forms described

as Psoriasis and Lepra, and Hebra, as early as 1841, explained the way in which the circular form, supposed to be characteristic of Lepra, was developed in the course of Psoriasis, simply by the peculiar grouping and retrogression of the eruption upon certain portions of the body.

Description and Course.—The characteristic appearances of Psoriasis are briefly these:—Isolated conglomerations of dry, silvery-white, imbricated scales, mostly round or in the form of curves or sections of circles, varying in size from a minute point to a silver dollar, or larger, and situated upon slightly elevated bases of the same form and of a deep red or coppery hue, resembling that considered to be peculiar to syphilitic eruptions. The scales, though adherent, are readily removed by the nails, and leave surfaces exposed, which bleed easily from minute points. The skin between the points or patches of eruption is in every way normal. Such are the appearances which meet our eye at first sight in all cases of Psoriasis, and in no other cutaneous affection is there the same uniformity of course and history, although if we were to take into consideration the many varieties or species which are described by certain authors, a student might indeed consider it difficult of recognition.

We cannot too strongly insist upon the folly of this fashion of dividing one simple disease into many varieties, according to the particular form it may assume at various stages of its progress. It is the chief cause of the imaginary difficulties which surround the study of this important branch of medicine, and only gives rise to confusion. Each new writer seems to think it his duty to invent new names for new varieties, instead of directing his efforts, where they are most needed, towards advance in etiology and treatment, apparently ignorant of the great truth that perfection in all classification is simplicity. Under this disease, for instance, we hear of Psoriasis punctata, guttata, alphoides, nummularis, scutellata, orbicularis, annulata, circinata, vulgaris, gyrata, circumscripta, diffusa, confluens, discoidea, centrifuga, imbricata, figurata, inveterata, and so on indefinitely. Now it would be quite as sensible to take a photographic picture of every individual case and label it according to the sirname of the patient as a distinct variety, as to make use of the above system of nomenclature. There were never two cases of Psoriasis exactly alike, and in every case we may find several of the appearances present at the same time, which have been described as separate varieties, or else succeeding each other, so that we neither know which of the names is the most appropriate, nor but that our choice to-day may be a misnomer to-morrow.

In the beginning we notice minute points, isolated, slightly elevated above the surface of the skin, of a dull red, coppery or brick color, generally situated about the hair-follicles, or little prominences tipped with a shining white cap, which are epithelial cells, and which,

if removed, exhibit hyperæmic bases. They may be distributed over every part of the body, spreading from several points as centres, and appear in rapid succession. The eruption looks very like drops of candle-grease stiffened upon the skin, or as if the patient had been spattered with mortar or plaster. We have now before us the stage called by authors P. punctata or guttata, according to the size of the individual spots. The disease, however, does not stop here. Fresh points appear continually and increase in size, as do those which preceded them. If, however, this process went on unchecked, it is apparent we should have the whole surface of the skin completely hidden in time, either by the peripheral growth of the older or by the occurrence of new eruptions, so that the disease could eventually increase only in thickness. Such a state, however, is never seen; there always remain interspaces of healthy skin. After attaining a size varying from that of a dime to that of a half-dollar, their growth often ceases, and they may remain in this condition weeks or months unchanged, if left to themselves. (P. circumscripta, nummularis.) The first retrogressive step shows itself at the point where the disease is oldest, that is at the centre of the patch. There the white epithelial scales become thinner and fall off, leaving the skin of a reddish tinge. The scales, however, still remain upon the raised periphery, which presents bold and prominent edges. (P. scutellata.) If the disease continue to yield, the redness finally disappears from the centre, and we then have healthy skin covered with circles of greater or less circumference of elevated scales. (P. vulgaris, annulata, orbicularis of Wilson and Willan.) Then the rings begin to break away at some point, or by spreading peripherally run into contiguous patches, which are undergoing the same metamorphosis, and disappear at such points of contact according to a general law in such cases. In this way we may have all sorts of shapes pictured out on the skin, circles and their segments, tortuous, geographical and astronomical outlines of endless variety. These also increase in size peripherally, and remind one of the sweeping and ever-changing march of the ignited carbon on the chimney-wall. (This is P. gyrata, figurata, and so forth.) Finally, they may become smaller day by day, and disappear entirely. In other cases, however, the efflorescences continue to increase peripherally without fading in the centre, and melt into each other, giving rise to large patches of diseased skin of very irregular shape and size, almost covering large portions of the body. When existing for a long time, the cutis beneath the patches undergoes changes, which in time produce new appearances. The papillæ become enlarged by infiltration, and generate scales of great toughness with surprising rapidity. The skin becomes dry, harsh, thickened and fissured with cracks, so that at times the motion of the joints is very painful. When scratched off the scales are rapidly formed again, and the operation is always followed by excoriations and bleeding. (P. diffusa, inveterata.)

At times the fresh eruption of Psoriasis has the appearance of true vesicles, so that some authorities state that it is sometimes a vesicular disease. The quantity of fluid, however, collected beneath the epidermis is very slight, too little, in fact, to deserve the name. With this exception, the eruption of Psoriasis is as we have described it in all its stages. We never see any formation of crusts, of pus, of scars, or of pigment deposit, nor the pustules and ulceration which accompany those forms of syphilis that resemble it somewhat in other respects.

Psoriasis is, unfortunately, a true chronic disease, lasting for months, years, or a whole life-time. Under proper treatment it may be made to disappear and leave no trace behind, and the patient may remain free from it for months, or two, three or even ten years, but it is sure to return, and generally with increased vitality. Whatever means we may employ, or however rapid and perfect the temporary cure, it seldom fails to repeat itself at irregular intervals through a life-time, however long.

Anatomy.—Minute anatomy throws but little light upon the pathology of psoriasis. If we examine a perpendicular section of one of the efflorescences, we find merely laminated masses of epithelial cells, and below them the papillary structure of the cutis, upon which they rest, in its normal condition. The red color and elevation of their base vanish completely after death, leaving nothing but scarcely noticeable collections of dry scales; and all we know of its real nature is what we have learned by external observation, viz., that Psoriasis is a circumscribed, excessive formation and collection of epidermal cells situated upon hyperæmic papillæ.

Seat.—Although in the majority of cases this disease first shows itself by a general sprinkling of the peculiar points of eruption over the whole body, yet in other cases it not only begins at certain points, but manifests itself nowhere else. These favorite and long-cherished positions are the elbows and knees. It likewise finds a convenient lurking place upon the head, not confining itself, however, to the hairy portions of the scalp, but revealing its presence by an ugly red border upon the forehead, ears and neck. In these cases the hairs generally remain unaffected, both in color and moisture, although they occasionally fall. It is rare, however, that the disease confines itself to this or any locality, although several varieties are described according to the particular portion of the body affected. There is, in fact, but one part of the external surface which is entirely exempt from its manifestations, and that is the lips, although Willan mentions a P. labiorum. Upon the palms of the hands and soles of the feet also it very rarely shows itself, whereas these localities are peculiarly the seat of syphilitic eruptions, which from their anatomical nature exhibit appearances so like Psoriasis as to be called P. palmaris syphilitica. When confined to these parts alone, we may be almost sure that we have syphilis and not Psoriasis be-

fore us. When we consider the intimate anatomical relations between the epidermis and the tissue of the nails, we should expect them to share in the changes which the former undergoes in this affection, and we find, accordingly, that upon some of the fingers and toes they become thick, lustreless, uneven, yellow or brown, and jagged at their free extremities. In some instances, even before the nail is affected, and while still transparent, we notice the well-known points of efflorescence forming beneath it, upon the matrix itself, that occur upon other portions of the skin. Some authors state that the eruption affects the extensor in preference to the flexor faces of the limbs, but careful observations directed to this point in a very numerous series of cases would seem to show no foundation for this common belief.

The *subjective* symptoms which accompany the external manifestations hitherto described are not of much importance. It has often been said that Psoriasis gives rise to no itching, but this is not the case. Compared with that which accompanies Eczema, Prurigo and other cutaneous affections, it is indeed slight, but every case is attended by a greater or less degree of it, generally in proportion to the amount of fresh efflorescence, and sometimes, in the beginning of the disease, of sufficient severity to deprive the patient of sleep. In these cases we often find in place of, or mingled with the silvery-white scales, brown or black crusts of dried blood produced by scratching, but in the non-progressive or retrogressive stages this symptom is scarcely at all troublesome. It not unfrequently happens, moreover, that some degree of inflexibility of the limbs arises in consequence of the stiffness of the skin around the elbows and knees, or that the motions of the hands and feet are interfered with from the same cause, although the great majority of so-called cases of Psoriasis of the hands are simply chronic Eczema. An occasional complication, also, is a slight degree of neuralgia in the fingers and toes, and in old cases of indigestion, but as a rule Psoriasis affects persons in sound health, and may remain by them through life without interfering with any functions of the body.

Etiology.—We know almost nothing of the causes of Psoriasis. It attacks persons of the most robust health and best constitution, and accompanies them through life, with intermissions, uninfluenced by the many changes of their outward circumstances. Should they, however, undergo any long or serious illness, the affection disappears, like a false friend, for the time, returning as soon as health and strength are restored. It is seldom seen upon individuals affected with any other chronic disease. Prof. Hebra has known of but one instance of its occurrence with tuberculosis. It rarely appears before the age of six, and in the majority of cases first shows itself between the ages of 15 and 30. Sex, station, mode of life and temperament are alike without influence over it, and it is found all over the world. As far back as medical history goes, we read accounts

of it, and it formed one of the kinds of Leprosy mentioned in the Bible. The time of the year is also powerless over the changes it assumes, and the same may be said of the use of alcoholic drink upon its production, for, as we have seen, it is as common in the female as in the male sex. It is not contagious, but is in the majority of instances hereditary, not unfrequently jumping one generation and appearing in the following. So many and varied are the causes, however, which have been assigned for its production by dermatologists, that the mere cataloguing of them renders the whole list a necessary absurdity. Among these the only ones which from the reputation of their authors deserve any consideration, are those of Hardy and Bazin, of Paris, and Wilson, of London. The former, like the French school in general, start with the preconceived and entirely arbitrary view, that there can be no pathological process without a diathesis, which is Greek for the old "humoral" theory. Accordingly they recognize, among others, a diathesis dartreuse or herpetic, which manifests itself upon the skin, they say, by lesions differing in their elements, not contagious, often hereditary, reproducing themselves in a nearly constant manner, accompanied by itching as their principal symptom, disposed to spread, chronic in their course, and healing without scars, though sometimes attended by ulceration. In this class they include Lichen, Eczema, Psoriasis and Pityriasis. Eczema is a moist dartre, Psoriasis is a dry dartre. Now it is perfectly proper to invent a general name in an artificial system of classification, and to group under it as many affections as their common appearances will allow, but it should always be remembered that such systems are founded upon resemblances and not upon affinity in anatomy or pathology. Such systems may perhaps be excusable on the ground of convenience, however unscientific, but they should never be allowed to influence us in our consideration of the real nature of the diseases included under them. We have no evidence of the existence of any such so-called vice of the economy as the dartreuse. We might invent twenty imaginary diatheses, and no one could prove their impossibility, but it is entirely unphilosophical to apply an arbitrary name to a group of distinct pathological manifestations, and then explain their occurrence by the very ideal cause of our own creation. Bazin goes still farther, and to the scrofulous, syphilitic and dartreuse he adds a hypothetical *arthritic* diathesis, which with him plays an equally important rôle with the dartreuse in the production of cutaneous affections, so that instead of one Eczema and one Psoriasis we now find well-marked forms of each described under separate divisions in his recent work. Processes such as rheumatism and gout being well known, we may attach some meaning to the so-called arthritic diathesis, although there is no possible connection between them and Psoriasis, but we are not the fortunate possessor of a physical sense which recognizes the existence of a Dartre. As to the opinion expressed by Mr.

Wilson that the leprous poison is in its essence and origin syphilitic, modified by transmission through several generations, we hardly know what to say, except that not a shadow of proof exists for such a statement, which might not be as well applied to every affection to which our flesh is heir. Indeed, we could hardly select a disease to which this unphilosophical style of reasoning would be less appropriate than to Psoriasis, for not only does it by preference affect those in the most robust health, and first manifest itself at an age far more advanced than that in which hereditary syphilitic forms of all descriptions show themselves, but it is entirely unaffected by such remedies as are found to be most effectual against the spread of the latter, and may exist for years without producing the slightest degree of cachexia. Nor should it be forgotten that both the so-called primary and secondary forms of syphilis may run their course at the same time with Psoriasis without affecting the development of the latter in the least.

Prognosis.—We have already seen that the appearances presented by the disease change from day to day as the old patches run their course, and as new eruptions come out and imitate their example. These changes are of value in forming our prognosis, and should be watched accordingly. When upon an individual suffering from Psoriasis we find the large and irregular patches merely without any minute and fresh points of eruption, we may be sure that he will soon be free from his trouble. If, however, we see signs of recent activity, even when mixed with the old forms, such as P. gyrata or figurata, we may surely predict a longer continuance of his difficulty. Therefore when we have a case to treat, and find the larger patches rapidly disappearing under our efforts, we shall deceive both ourselves and patient with false hopes if we prophesy a speedy cure, unless the fresh eruption disappears in the same degree, and is prevented from showing itself anew. It can never be predicted, however, when a relapse will occur, how long it will continue, or how long after its disappearance the patient will remain free from its attacks. Cases of general Psoriasis, when the efflorescences are separated by minute portions only of healthy skin, are often very obstinate, if not incurable. It should be remembered, also, that cases of apparently mild character may all at once assume great activity and change into the worst known forms.

Treatment.—The innumerable host of remedies recommended in the treatment of Psoriasis from ages past down to the present time, illustrates better than anything its obstinacy and incurability. For us it will be enough to consider here only those which are most in use at the present day, and which are advised by the highest authorities. They may be divided into the internal and local, but before considering these in detail, we wish to say a few words in relation to the old and generally-received opinion regarding the absolute necessity of some kind of internal treatment in all diseases of the skin.

This no doubt originated in the humoral pathology of former days, which still finds expression in the popular belief that such diseases should not be "driven in" or allowed to "strike in." Without intending to deny that many constitutional diseases may exhibit themselves in some manner by sympathetic cutaneous symptoms, we maintain that the skin in itself is a great and complex organ, and is as liable as the lungs, liver and kidneys to individual diseases, and moreover that the results of *local* treatment prove that it is a fallacy to believe that skin diseases are merely indications of some deeper-seated malady or blood-change, requiring accordingly constitutional remedies. We believe that it is in rare instances only that the ordinary chronic affections of the skin stand in any relation to the general health that we can distinctly recognize. In this connection we would introduce an extract from the latter part of the preface of the last edition of Wilson, a writer who has always insisted upon the necessity of constitutional treatment:—

"That certain diseases obviously proceed from a local cause, and are in their essence local diseases, and independent of constitutional influence, is a truth which has been strongly impressed upon us by the celebrated dermatologist of Vienna, Hebra. Many cutaneous diseases which in this country, and with our humoral tendencies, we should be led to treat by constitutional as well as by local means, Professor Hebra would treat by local means alone, and the great success of his treatment leads us to inquire at what point between the two extremes the truth lies concealed. I believe that our lesson will be best learned by devoting more attention than heretofore to local treatment; and not less to constitutional treatment. The great excellence of the treatment of disease in England depends upon the proper appreciation of its almost universal constitutional origin. During his late stay in London, Professor Hebra honored me with his presence in my consulting-room on several occasions, and has left on my mind an ineffaceable impression of his rapid and sound diagnosis, and his extraordinary tact in the local management of cutaneous diseases. He is too sound a physician to reject constitutional means; but he declares that they are much less needful than is believed by us, and that a very considerable number of diseases are local in their nature, and may be perfectly cured by local remedies."

We should remember, moreover, that in the same degree with which the skin is disposed to the reception of contagions and virus of various kinds, with the same facility will it admit the entrance into the general economy of remedies. The celerity of the inunction cure in syphilis, the black stools and urine after the general application of tar compounds, and the easy chemical recognition of iodine in the secretions after its external use, are familiar examples of this truth. Local treatment also enables us to bring in direct contact with the diseased tissues the substances we wish to employ, and to study directly the changes they effect, while it leaves the stomach and intestinal canal to perform their important functions in peace.

Among the *internal* remedies, arsenic enjoys the highest reputation in this, as well as in most other chronic diseases of the skin. It possesses the power of causing the eruption to disappear in the majority of cases, although a long period of time is generally necessary to effect this. The objections to its use are this slowness of action and the specific toxicological symptoms which sometimes follow its most carefully watched employment. It should be administered upon a full stomach, and rather during the meal itself than before or after it. The preparations which are employed are Fowler's solution (arsenite of potash), Pearson's solution (arsenite of soda), Donovan's solution (containing arsenic, mercury and iodine), and the Asiatic pills (arsenious acid and pepper). The first of these, which contains about one grain in seventy drops, is used by Prof. Hebra in the following manner: six drops are given before meals and increased by one drop every second day, unless counter-indicated, until twelve drops are reached. This will generally produce some action upon the eruption. The quantity of scales upon the patches are diminished, the red color of the spots becomes paler or is changed to brown, and the itching subsides. In case no improvement is noticed, the dose must be increased at intervals of four days until twenty drops are reached, or, if this is insufficient, even up to thirty drops (one third of a grain of arsenic). At whatever point improvement is noticed, we should continue at that dose until the red spots have either entirely disappeared or have become brown, or until all fresh appearances have ceased. After this the dose may be gradually diminished to the quantity started with. Prof. Hebra has employed it thus for many months, often exceeding two thousand drops, without seeing any evil results follow. Pearson's solution is given in doses of fifteen drops, and has the advantage of a simple composition, and of being very easily borne. The Asiatic pills, containing ·08 of a grain, are also a convenient form of administering arsenic. Generally three during the day are sufficient, but in obstinate cases Hebra has increased this number to twelve, or 0·9 of a grain, and has continued their use till 2000 have been taken, a number which represents 160 grains of arsenious acid. The largest experience teaches that whichever of these forms is employed the same results are obtained, namely: the probable disappearance after an indefinite time of the efflorescences, but with all of them, even when administered in their largest doses, new patches may appear at the very time the older ones are vanishing. However completely the disease may appear to yield to them, it will return.

Formerly tincture of cantharides was much used, and is even now recommended by Hardy. It is to be given in increasing doses until its specific effect is produced upon the kidneys. If as many as thirty drops are given daily, strangury is produced, and the urine becomes albuminous and bloody. In the thorough trial given to this

remedy in the Vienna clinic, these were the only results obtained. It had no effect whatever upon the Psoriasis. In no case did it act as an aphrodisiac.

Antimony, iodine, lead, mercury, baryta, tar, copaiba and many other substances have been tried and found useless. The continued use of laxative medicine will cause the eruption to disappear for a time, as it will that of many cutaneous affections, including the syphilitic, and it is on this account that the mineral waters are advised in this disease. The cure, however, is but temporary, lasting only as long as the exhibition of the saline cathartics is continued.

External.—We have seen, then, that we may not cure Psoriasis by any form of internal treatment whatever; we may only banish it for an uncertain period, at the end of which it returns with all its old vigor. We have seen, too, that arsenic is the only internal remedy capable of accomplishing even thus much. Let us now see what and how much we may effect by the use of topical applications. Starting with the theory that the disease is an abnormal development of the epidermis, we would naturally call to our assistance such substances as hasten the separation of the old and the formation of new and healthy epidermal cells; the same set of remedies, in fact, that we find so useful for similar purposes in other chronic affections, as Eczema, Prurigo, &c. These are water, alkaline soaps, tar and sulphur preparations.

Baths of all kinds *help* us on a little in conjunction with the applications about to be mentioned, but they must be used thoroughly. It makes but little difference about their temperature or chemical nature, if we avoid those which excite an eczematous condition of the skin. In Louèche, Switzerland, there are natural baths, which persons with Psoriasis frequent. At the end of the season, after having spent two hours of every day in their waters, they go home with fair skins, but the relief is temporary, and spring generally finds them spotted once more and waiting for the opening of the fountains. Prof. Hebra has recently invented a so-called continual bath for the treatment of extensive burns of the skin, and patients with this disease were kept in the same for more than one hundred days, and with very little effect upon it.

The well-known action of alkalies upon the skin would naturally suggest the use of soap in Psoriasis for the purpose of washing off the collection of effete epidermal cells, and we find that very good results may be obtained if we make use of the proper kinds. Those made of soda are almost inert, but those in which potash is used as a base exert a very powerful solvent action upon the epidermis. It is on this account that sapo viridis, or schmier seife, is used so commonly in Germany in this affection. This substance is made in various parts of that country, and its formula may be approximately expressed by caustic potash, solution of s. g. 1·33, one part, whale oil two parts. Good specimens are not always obtainable, nor is it

easy to manufacture it properly in the laboratory. It is somewhat thicker than honey, of an olive-green or brown color, of uniform consistence, and sharply alkaline, though not caustic taste, without solid ingredients when rubbed between the fingers, has no rancid odor, and is entirely dissolved by alcohol. In cases where the disease is confined to certain portions of the body, it will be enough to rub such twice a day with the soap, and, if necessary, to make cold-water applications subsequently to prevent excoriations. In cases where it is of long standing and affects the whole body, it is better not to wash away the soap, but, after applying it thoroughly, to put the patient to bed wrapped in blankets. It may be applied also as a fomentation, by spreading it thickly upon a piece of flannel, and binding this upon the affected parts. In this way we may treat a patient who desires to continue about his business, or who is unwilling to remain in bed. The cloths should be freshly smeared every night, and then bound on again. After twelve applications morning and evening, or after the bandages have been worn six days, we give the patient a day of grace for the purpose of healing any excoriations that may arise in consequence of the treatment, and to see if a healthy epidermis will take the place of the former scales. Some persons will not endure so long a course as this, and certain portions of the body should always be avoided by the bandages, on account of the eczema and stiffening produced by the undue application of the soap to such parts. The patient, therefore, should be carefully watched from day to day, and when this is impossible Prof. Hebra advises that the diseased patches should be rubbed with the soap morning and evening, or to make use of the bandages freshly smeared on the first three days of the week, and to leave them unchanged during the last three. If at the end of our six days' labor we have not fully accomplished our object, we must repeat the process on the following week. Schmier seife is particularly valuable in this disease, however, for the removal of the masses of epidermal cells which protect the tissues at fault preparatory to the employment of other remedies, or in conjunction with them. It is more efficacious in Psoriasis of the scalp than in any other form, and generally will cause its disappearance in a short time. A more convenient way of applying it is to make a strong solution in alcohol, two parts of the soap to one of spirit, to which a perfume may be added if desired, and which is an extremely useful agent in many cutaneous affections.

The use of tar in cutaneous diseases was known in the days of Pliny and Theophrastus, but was forgotten for centuries, to be resumed in our time as one of the most valuable remedies in the treatment of these affections. It is, as is well known, an empyreumatic oil obtained by dry distillation from various woods, of which the following forms are those principally used in medicine:—Ol. cadinum, from juniperus oxycedrus of Southern Europe, ol. fagi from

the white and red beech, ol. rusci or ol. betulæ from the bark of the birch, and the common tar of the Southern pine. They all possess nearly the same penetrating odor and dark color, and their action upon the skin is likewise uniform. The ol. rusci, however, possesses the advantage of a more agreeable odor than the others, it being the source of the pleasant smell of Russia leather. They may all be used alone or in combination with lard, glycerine, soap or alcohol. Although these preparations may be generally used upon limited portions of the skin with no unpleasant effect, patients are occasionally met with in whom a single application produces a redness and swelling, which terminates in true erysipelas. Again, there are those who bear the application well for a time, but upon whom an inflammation of the hair-follicles, a specific tar acne, is finally developed. Should large portions of the body, however, be rubbed simultaneously with them, quite a different series of symptoms is produced. In a space varying from half an hour to three or six hours, vomiting of a black fluid ensues, or black fæces and urine, nearly the color of ink, are passed, which have a strong tarry odor, and leave no doubt that these substances have entered the circulation. Accompanying these appearances other symptoms, such as fever, nausea, constriction of the head, appear, but they are not of long duration, and never cause serious trouble. When used in this affection, they should be applied with a small brush every evening to the parts diseased for several days, and then omitted for a few, till the crust formed by their application falls off, when they are to be resumed. Better progress will be made, however, if we combine schmier seife with the tar. First give the patient a warm bath, then rub the skin with the soap, and after its removal apply the oil of cade. We may in some cases mix the two substances with advantage, as in the following recipe:—Sapon. virid., ol. cadini, āā ʒ i.; alcohol, ʒ ij. M. This is to be applied after a bath every evening. The tar which accumulates upon the skin should be removed every few days by the means of oil and soap.

In cases where we cannot make use of either of the above remedies, an ointment of either proto- or deut-iodide of mercury, of the first a scruple, of the second ten grains to the ounce of fat, may be employed. It may under certain circumstances be desirable to remove the diseased patches, from the face, for instance, without delay. This may be done by applying a solution of corrosive sublimate, five grains to the ounce of alcohol, by which the epidermis is rapidly removed, leaving the skin fair beneath the blistered surface. The effect, however, lasts but a short time, and the operation is a painful one.

Vleminckx Solution.—Lately a new remedy has been introduced in the treatment of Psoriasis, which is far more valuable than any of those hitherto mentioned: namely, the so-called Vleminckx solution. It is prepared by boiling two parts flowers of sulphur with

one part caustic lime in twenty parts water down to twelve parts, when it is filtered, and we have a bright orange-colored, bad-smelling liquid. Its only disadvantage is its nauseous odor, which can be effectually hidden by the addition of a little oil of bergamot, but its curative action is so evident that the most delicate lady does not object to its use. Every portion of the skin affected is to be rubbed energetically with a flannel wetted with the preparation till the masses of epidermis are removed, and a slight bleeding shows that the deepest portions of the cuticle are reached, and the papillæ laid bare. The patient is then to be placed in a warm bath, where he remains an hour. The skin is then to be washed with simple cold water to remove the sulphur, and to be rubbed with some fatty substance or a weak tincture of cade, by which all unpleasant symptoms and sensations are prevented. This is to be repeated every night until the disease is removed.

We may conclude, therefore, that Psoriasis is a disease which we are entirely unable to cure radically, either by internal or external treatment. We may by the long-continued use of arsenic drive it away. We may produce the same effect by local applications in a short time. The cure is the same in both; is as permanent in the one case as in the other. It may perhaps be advantageous to combine both methods in some particularly obstinate cases, but as a rule the local measures may be considered far superior to arsenic in point of rapidity of action, and never produce any injurious effects.

SEWERS AND THEIR EVILS.

THE immense extent of the London system of sewerage probably converts the sewers into one enormous cess-pool. It was, of course, the decomposition of the animal excrements which gave rise to the dangerous vapors issuing from the cess-pools. Now, if these excrements are allowed, in consequence of the length of the sewers through which they now have to pass, to decompose, as they decomposed in the ancient cess-pools, why should not the vapors and gases arising from the decomposition in the sewers produce as noxious effects as they produced when they escaped from the cess-pools? We some years ago suggested this question, Whether our present system of sewage would not become one enormous cess-pool; and whether some special provision ought not to be made for the escape, by high shafts, or neutralization of the products of decomposition. If it be true that the contents of our sewers in London undergo decomposition just as they underwent decomposition in the old cess-pools, surely it was something akin to madness to set loose all the products of the decomposition at our very doors and under our very noses. But all this matter requires investigation; and interesting would it be, if we could get some sure information as to the ordina-

ry health of those men who pass many hours in these sewers, and whom we occasionally see emerging from iron traps, with lantern and heavy jack-boots. What effect does the inhaling of the vapors of sewers have upon them? Perhaps some of our readers can tell us something of this; and we may add, that we wish Dr. Fuller had furnished the *Times* with some positive proof that the issue of gases from sewers had injured human constitutions and produced diseases.

Dr. Miller, Professor of Chemistry in King's College, says truly enough, that sewers must be ventilated—i. e., the gases must be let out of them—so long as it is necessary for men to pass through them; and he recommends the process of ventilation and disinfection proposed by Dr. Stenhouse.

It consists in suspending charcoal in the ventilating openings. In London, the plan has been carried out by the engineer to the Commissioners of Sewers, with the sanction of Dr. Letheby; and both these gentlemen have reported strongly in its favor. There is placed in each ventilating opening a box, within which are three or four perforated shelves, and on each side of these shelves is a layer of wood charcoal; openings are made at the top and bottom of the box, to allow the free passage of the air; the whole of the air which escapes from the sewer is obliged to pass through the box and over the charcoal before it reaches the outer atmosphere. The offensive and noxious gases are speedily absorbed by the charcoal, and are oxidized within its pores, by which means they are converted into a harmless substance, destitute of odor. "The method is so simple and effectual," says Dr. Miller, "that it ought at once to be put in practice, while yet there is time." * * * * * *

Dr. Herbert Barker, who has proved himself to be a high authority on the subject of disinfection, speaks of ozone as being "Nature's grand atmospheric disinfectant." His observations are of much interest, and the practical conclusions recommended worthy of consideration, especially in reference to this matter of the cholera. We conclude that Dr. Barker has satisfactory proofs of the fact that ozone is really absent in the district where cholera rages, &c. Of course, the full establishment of this fact is very important.

"In the neighborhood of cesspools, all evidence of the presence of ordinary atmospheric ozone is lost. When ozone is abundant in the air, it may be detected on the windward side of a stable, or cow-shed, or manure-heap, but not on the leeward side. It may be observed abundantly immediately on the windward side of a town, and not a trace of it discovered at the same time on the leeward side. The ozone test paper, in an ill-ventilated church, when full of persons, will give no reaction. I have evidence from my own experience that the diffusion of ozonized air through the apartments of persons suffering from fevers, is of immense service, in that it keeps the room free of oppression, and effectually destroys the offensive

odors arising from the gaseous excreta of the subject. Ozone, in its action as a deodorizer, closely resembles chlorine. It can be employèd permanently by a single process with ventilation. Ozone may be prepared by Siemen's cylinder, the air driven through the cylinder being ozonized by sparks from Ruhmkorf's coil. This method can be adopted only in hospitals, as skilled hands are required for its management. Fortunately, we have a means of generating ozone from phosphorus, which is ready for use at any moment, and with little trouble. Two sticks of phosphorus, each two inches in length, made very clean by scraping, if covered with oxide, and half covered with water, will yield in an hour sufficient ozone, in a room of 3,000 cubic feet, to be detectable by Schönbein's test in every part, and this even when there is good ventilation. The objection to the production of ozone, that there is not a sufficient bulk of water to absorb the fumes of phosphoric acid, may be obviated by using a vessel containing a larger quantity of water, and by floating the phosphorus at the proper depth upon its surface. The degree of evolution of ozone may be tested by a slip of Schönbein's paper. It is very remarkable that, during the prevalence of cholera in any district, ozone has been observed to be absent in that district; not the smallest trace has been discoverable by the test-papers."—*Medical News and Library*, from *British Medical Journal.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, NOVEMBER 16, 1865.

THE CHOLERA—THE QUESTION OF QUARANTINE.—The question of quarantine is one which comes up with practical force at the present time, when the actual existence of this terrible destroyer among the unfortunate passengers on board a vessel in New York harbor has called for immediate and decisive action on the part of the municipal authorities. When it last visited our shores, it made its first appearance at Staten Island, and but a few days after it broke out at the southern extremity of the United States, at New Orleans. The character of both these places as great commercial centres indicates clearly enough the way in which it was probably admitted to our country. But any other of our sea-coast cities may be the gate of entrance of this disease, and the question of the best method of excluding it becomes, therefore, one of national importance. We do not propose now to discuss the question of the contagiousness or non-contagiousness of cholera. We presume the majority of the most reliable medical authorities accept the theory of its non-contagiousness, and personally we incline to this view. But the question of judicious quarantine is one of a mixed character, not to be decided for an unprofessional community on purely scientific principles. We hold that something in this case should be yielded to the popular apprehension, to

the very general fear which almost always accompanies its appearance.

Is it likely, then, that a rigid exclusion from our ports of all vessels having the cholera among its passengers will have any influence in excluding it altogether, or in materially retarding its appearance on our shores? We answer most emphatically, in our opinion, Yes. A parallel instance presents itself for our guidance in the case of yellow fever. We are of the opinion that with regard to contagiousness and the power of infection these diseases stand about alike. No candid person at the present day can doubt that the rigid exclusion of vessels having yellow fever on board has been the chief reason of its non-appearance during the last four years in those of our Southern ports where it has been practised, and where this disease had been almost an annual visitor before. Once give it a foothold on our shores, and no one can tell how far it may spread; but hold it off at arm's length, and it is harmless for general injury.

Precisely so do we believe it to be with cholera. At any rate, by adopting similar precautions we do the best we can to close our doors against it. The experience of European communities shows how rapidly it spreads when once it breaks out, and no precaution short of actual cruelty should be neglected to avert such a dreadful calamity here. The popular mind is not prepared to look upon this disease with the calmness of a trained physician. The war-hardened veteran may calmly brave the fiery tempest of the battle-field, knowing that a bold front is attended with less actual danger to an advancing host than the panic-stricken retreat of an army with its back to the foe; he nevertheless does not unnecessarily expose his inexperienced soldiers to such a trying ordeal. Just so is it in the battle with this disease. Fear destroys, or prepares for destruction thousands, to whom the sense of security arising from the knowledge that they are not in the immediate neighborhood of it, would be in itself a very powerful protection against it. There can be no doubt that of all epidemics fear predisposes more to this one than to any other, from the direct effect which this emotion has upon the organs which are the principal seat of its attack.

It is greatly to be regretted that the National Government, as such, has no direct authority to institute a quarantine which shall lock up all our borders to the entrance of persons infected with cholera. In the absence of such a power it becomes each State to see to it that for the good of the whole country no possible precaution of this kind shall be omitted. No vessel having cholera on board should be allowed to discharge its passengers until a reasonable time has elapsed for the disease to disappear among them. Every provision should be made for their comfort and security at a distance from any community on shore; the well should be isolated as much as possible from the sick, but too rigid precautions cannot be taken, in our opinion, to keep them from any intercourse with our people until the danger has manifestly passed. It is a grave question how strict a rule should be applied to steamers from foreign ports. Passing so rapidly as they do from Europe to this country, they may possibly land upon our shores passengers from infected places in whom the disease may not manifest itself until after they have landed. It is an important question, which we recommend to the serious consideration of our health officers, on

which at the present moment we do not feel prepared to give an opinion. Sailing vessels, we suppose, as a general rule, are so long in coming from Europe to America, that, if they arrive without the disease on board, or after a reasonable interval after its disappearance if it has been on board, they hardly require detention at quarantine. We certainly should not advocate an indiscriminate detention of all vessels from cholera infected ports. We cannot close our remarks better than with the following summary, which closes a special report on the present epidemic, which we find in the London *Medical Times and Gazette:*—

"The disease has in no single case taken an overland route, but has travelled from coast town to coast town as it has been carried. In this history there is nothing new, but everything that is old and, we had almost said, established. Least of all is there anything capricious about the disorder, as some of our unscientific contemporaries are fond to say. Cholera follows the sower of it, as does wheat or other grain; and like wheat or other grain it must be carried on from shore to shore, and being carried must, even when landed and distributed, find a field prepared for it, otherwise it will not grow.

"To conclude for this week, the current epidemic tells us, as every preceding epidemic has told us, three demonstrable facts—viz., that for cholera to be diffused over the earth it must have three factors for its cultivation—

"1. A centre of pollution for its cradle.

"2. A ship for its transport.

"3. A number of cities and towns properly prepared for its reception and development."

Berkshire Medical College.—The Commencement of the Berkshire Medical College occurred on Wednesday, Nov. 8th. The exercises began at 10½ o'clock, A.M., by reading of the Theses. Prayer was offered by Rev. Dr. Todd, of Pittsfield, after which the President, Dr. H. H. Childs, made a brief but impressive address to the graduating class and conferred the degree of Doctor of Medicine on eighteen candidates, and the honorary degree of Doctor of Medicine upon Prof. Wm. C. Richards, of Pittsfield, and Robert Treat, of Wisconsin. The exercises were concluded by a very able and exceedingly interesting valedictory address, delivered extemporaneously, by Prof. Wm. C. Richards, M.D., who was recently appointed to fill the chair of "Chemistry and Natural History," made vacant by the resignation of Prof. P. A. Chadbourne, M.D.

The following is a list of the names of the graduates and the subjects of their theses:—

Names of Graduates.	Theses.
F. S. Abbott, A.M.	*Mind and its Influence on Disease.*
Charles Bliss	*Fibrin and its Uses.*
A. J. Browne	*Pyæmia.*
A. S. Deane	*Acute Rheumatism.*
J. N. Dickson	*Modes of Death.*
G. W. Emery	*Variola.*
Stillman Gitchell	*Diagnosis of Pneumonia.*
W. A. Jones	*Hereditary Transmission.*
F. B. Lawson	*(Excused.)*
Charles McAllister	*Abscess.*
J. H. Page	*Necessity of recognizing Imaginary Diseases and Remedies.*

Names of Graduates.	Theses.
M. J. Powers	*Puerperal Peritonitis.*
O. F. Searle	*Syphilis.*
E. H. Sexton, A.M.	*Evidences of Utero-gestation.*
H. S. B. Smith, A.M.	*Phthisis Pulmonalis.*
Arnold Stedman	*Tubercular Meningitis.*
Hiram Temple	*Asthma.*
John Winsor	*Diagnosis.*

We are requested to state that the first number of the *Richmond Medical Journal*, for January next, will appear early in December—to be published monthly, in Richmond, Va., at $5 per annum. Drs. E. S. Gaillard and W. S. McChesney are to be the Editors and Publishers. The first-named gentleman, it will be recollected by our readers, was the author of the interesting Prize Essay on Ozone published in the 71st volume of this Journal. We cordially welcome them into the editorial ranks.

New Orleans School of Medicine.—The sixth annual course of lectures will be opened in this school on the 13th of November. The following constitute the Faculty:—E. D. Fenner, M.D., Professor of Theory and Practice; D. Warren Brickell, M.D., Professor of Obstetrics and Diseases of Women and Children; Samuel Choppin, M.D., Professor of Operative and Clinical Surgery; C. Beard, M.D., Professor of Principles of Surgery; J. L. Crawcour, M.D., Professor of Chemistry and Legal Medicine; Howard Smith, M.D., Professor of Materia Medica and Therapeutics; A. C. Holt, M.D., Professor of Physiology.—*Medical News and Library.*

Chinese Customs During Menstruation.—At a meeting of the Edinburgh Obstetrical Society, Dr. Keiller stated that a naval officer, now stationed in China, had directed his (Dr. K.'s) attention to the peculiar manner in which the Chinese women were accustomed to treat themselves during menstruation. The gentleman referred to had, in his communication, enclosed a folded sheet of soft and apparently very bibulous paper, which he stated was similar to that generally used in China instead of the ordinary cloth or napkin used by females in this country. Dr. K. read from the letter he had received the following observations regarding the matter:—

"You will be much surprised and puzzled when you receive this letter and its enclosure; so I will at once clear it up. I was talking to Dr. Medows, of Ningpo, about the personal cleanliness of the Chinese being so bad, when he told me it was not so bad as I supposed, and mentioned that in one particular they were more careful than ourselves; that is, with women during their menstrual period, instead of using a cloth as European women do, they use the paper enclosed, which is folded exactly as it is in the envelope, except that I have turned down one end to make it fit the envelope. He tells me a belt is used, and a cloth to go over the paper and keep it in place. The Chinese amas (servants) to European ladies refuse to wash the cloths which they use, and ladies therefore use the paper, and Dr. Medows tells me they prefer it. The Chinese always burn it. I do not know if such paper could be procured at home; but should you think it

worth a trial in Scotland, I will be most happy to send you some, and make arrangements for your receiving a regular supply, should it be adopted to any extent, and no substitute found at home. I have troubled you with this because I believe small things contribute much to the comfort of all, and are more frequently overlooked because it is no one's business. I have so little to do of my own at present that I have to look out for some."—*Edinburgh Medical Journal.*

Rupture of the Abdominal Parietes and Issue of a Living Child.—Dr. Geissler relates the following extraordinary case:—A woman was found in a stable trodden under foot by a bull, and at the point of death. The horn of the animal had passed under the edge of the ribs in the right hypochondrium, and had torn the parietes in nearly a transverse direction as far as the left side. The intestines were torn and extruded, and the upper part of the uterus was carried clean away, with the exception of a portion on the right side, to which the placenta was still attached. The os uteri was closed. A full-timed, strong male child was in this way liberated uninjured from the womb, and screamed loudly. The funis was twisted several times round the neck, a piece of torn placenta remaining attached to it.—*Monats für Gebürt—Medical Times and Gazette.*

Tennessee Hospital for the Insane.—From the Superintendent's Report to the Trustees, we learn that the whole number of patients in the institution August 1, 1862, was 204, of whom 115 were males, and 89 were females. There have been received since and prior to April 1, 1865, 134—104 males, 30 females—making the total number treated within two years and eight months, to have been 338—males, 219, females, 119.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, November 11th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	33	39	72
Ave. mortality of corresponding weeks for ten years, 1853—1863	36.8	35.7	72.5
Average corrected to increased population - - - - -	00	00	79.09
Death of persons above 90 - - - - - - - -		0	0

Communications Received.—Dr. Cotting's Address and Dr. Rice's Review.—Commencement at the New Hampshire Medical Institution.

Pamphlets Received.—Transactions of the American Ophthalmological Society at the Second Annual Meeting, held in New York, June, 1865.—Documents communicated to the General Assembly of Vermont, by His Excellency the Governor, concerning the spread of the Asiatic Cholera.—Annual Circulars of the Berkshire Medical College and the National Medical College.

Deaths in Boston for the week ending Saturday noon, November 11th, 72. Males, 33—Females 39. Accident, 3—apoplexy, 2—inflammation of the bowels, 1—disease of the brain, 1—bronchitis, 3—consumption, 14—convulsions, 2—croup, 4—diphtheria, 1—dropsy, 1—dropsy of the brain, 2—dysentery, 4—typhoid fever, 2—gastritis, 1—disease of the heart, 4—hernia, 1—ileus, 1—infantile disease, 2—intussusception, 1—disease of the liver, 1—inflammation of the lungs, 9—measles, 1—old age, 1—paralysis, 1—premature birth, 1—thrush, 1—unknown, 5—whooping cough, 1.

Under 5 years of age, 27—between 5 and 20 years, 10—between 20 and 40 years, 14—between 40 and 60 years, 9—above 60 years, 12. Born in the United States, 54—Ireland, 13—other places, 5.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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SURGICAL CASES, FROM THE RECORDS OF THE CITY HOSPITAL, BOSTON.

REPORTED BY DAVID W. CHEEVER, M.D., ONE OF THE VISITING SURGEONS.

[Communicated for the Boston Medical and Surgical Journal.]

Sixth Paper.—TWO CASES OF VESICO-VAGINAL FISTULA. TWO CASES OF THYROID TUMOR.

CASE I.—*Vesico-Vaginal Fistula; Operation; Entire Relief.*—(Under the care of Dr. Cheever.)—August 27th, 1864. Mary C., æt. 40, has borne six children, and always had an easy time until the last one, twenty-two months ago, when she had to be delivered by instruments; since then has been unable to retain her urine. The patient having been etherized, her nates were brought to the edge of the bed and elevated on pillows, the thighs held apart, and the labia widely separated by silver retractors. The posterior wall of the vagina and perinæum was also depressed by a curved Sims's speculum. The seat of disease was thus brought plainly in view. A circular opening existed on the anterior wall of the vagina, and about half an inch in front of the os uteri. Through this the urine freely passed. The fistula was drawn down by a long, rat-toothed forceps, and the edges refreshed. A straight slit was also made at either end to convert the wound into an oval rather than a circular one, so that the edges might come freely together. Three silver-wire sutures were now passed with ease, by means of Sims's perforated needle. The sides were approximated, and the wires secured by twisting only, no buttons or quills being used. The vagina having been sponged out, and the bladder emptied, the patient was placed on her back with a Sims's S-shaped catheter in the urethra, and a rubber tube to conduct the urine to a vessel at the side of the bed. Opium *pro re nâta*. Light diet and perfect rest.

Aug. 28th.—Complains of soreness of abdomen; relieved by fomentation of hops. The vulva dressed with simple cerate. Catheter cleansed three times a day.

29th.—Comfortable.

30th.—Several loose discharges from bowels. Ordered flour porridge, and to continue opium. Bladder syringed out.

Sept. 1st.—Complains a little of catheter. Vulva moderately swollen; to be kept well anointed. All the urine passes by the catheter; no leaking.

2d.—Troublesome cough and restless night; cough causes pain in urethra and bladder. Tongue a little dry. Urine pretty clear. Ordered cough medicine and fomentations.

3d.—Much better.

5th.—A recent clot, four inches long, passed through catheter. No leaking of urine.

6th, 7th, 8th.—Doing well.

9th.—One fortnight since operation. Silver sutures removed. Perfect union. Wound seems to be contracting.

14th.—Allowed to sit up for a short time. Catheter still used.

17th.—Catheter to be used at night only. Patient to make water every hour during the day.

22d.—Some complaint of catheter; to be discontinued entirely. To be waked every three hours to pass her water.

24th.—Sat up all day. Ordered iron and ale.

October 4th.—Five weeks since operation. Discharged well.

Case II.—*Vesico-Vaginal Fistula; Operation; Failure.*—(Under the care of Dr. Cheever.)—July 6th, 1865. M. C., æt. 33, has had seven children, with only an hour or two's sickness. The last labor was seven weeks ago, and lasted forty hours. The child was delivered dead, with instruments—weighing (she says) 18 pounds!! Unable to retain her urine since. On examination, the fistula was found in the upper part of the vagina, and three fourths of an inch long.

July 8th.—The bowels having been cleared with castor oil and an enema, the patient was put in the lithotomy position, with pillows under the hips. Retractors and Sims's speculum were used to expose the parts, and an elastic catheter, to act as a syphon, kept in the bladder. The edges of the fistula were found quite hard, and were freely pared. A number of small urinary concretions were found just inside its edges, and were removed. The opening was prolonged longitudinally above and below. The wound was brought together by five silver sutures, which were twisted without split bars or shot. An S-shaped catheter and rubber tube attached, were now arranged, and an opiate administered.

July 10th.—Very little pain. Only one grain of opium last night. Complains of some uneasiness in breasts from her milk; a soothing lotion applied. Catheter cleaned and bladder syringed out.

11th.—Doing well. No leaking of urine. Patient continued doing well, with no operation from bowels, *no leaking of urine*, and very little irritation from catheter, until *the eighth day*. On the night of that day, through some misunderstanding between the nurse and herself, the catheter was *pushed up the vagina instead of the urethra*, and was so found the next morning. The urine had accumulated

and broken through. Small quantities, however, only passed, and when the sutures were removed several days later, it was found that the opening was considerably diminished in size. An attempt was then made to close it by caustic, and by keeping a catheter in the bladder; but the patient's health began to give way under the confinement, and she had an attack of iritis. It was therefore thought more prudent to send her home, and to have the operation repeated in cooler weather, if she will consent.

There seems to be no reason to doubt that this case would have been as successful as the first one, had it not been for the *faux pas* on the eighth day. By that time very considerable union must have taken place, as evidenced by the perfect dryness of the vagina. As is well known, much more depends upon the vigilance and care of the nurse in the after treatment than upon the operator himself. In all moderate-sized fistulæ we believe the closure may be effected by simple silver sutures, without the use of perforated bars, buttons, or split shot. We cannot speak too highly of the great facilities afforded by Dr. Sims's speculum and perforated needle in doing this operation.

Case I.—*Bronchocele—Predisposition contracted in Germany, Disease developed in America; Death.*—(Under the care of Dr. Buckingham.)—January 17th, 1865. Catherine N., æt. 69, born in Baden. Has always been healthy. Has lived in Boston *twenty years.* Parents died of old age. Goitre was of frequent occurrence in her native place, although no member of her own family was affected by it. First noticed enlargement of thyroid gland *six years ago.* For three years it increased slowly, but latterly has grown rapidly; now prevents her from lying flat, owing to difficulty of breathing.

A large tumor occupies the front and both sides of the neck, extending from the anterior border of the trapezius on the right side to within an inch of the same point on the left; lobulated, hard, slightly movable, and divided by a median fissure into two principal lobes—the right larger than the left. Sterno-mastoid muscle and carotid artery, on right side, displaced; the artery being plainly felt behind the tumor. Left sterno-mastoid muscle passes over tumor. Measurements—horizontally, from side to side, 14 inches; right half, 8¾ inches; left half, 5¼ inches. Pressure on left side causes a choking sensation.

January 18th.—She was ordered good diet. Syr. ferri iodidi internally. Externally, ethereal tincture of iodine.

24th.—Tumor injected subcutaneously with an aqueous solution of iodine and iodide of potassium. Continued until 29th, when the tumor began to grow red and painful.

February 3d and 4th.—No appetite. Tumor painful and inflamed. No sleep. Failing. Continue syr. ferri iodidi. Omit local treatment, the tumor being of such bulk, consistence and duration as to

preclude any hope of absorption, and the local treatment aggravating her sufferings. It is also obviously impracticable to think of surgical interference with such a tumor at 69 years of age.

10th.—Troublesome cough; asthmatic, wheezing respiration. Ordered cough medicine.

March 3d.—Continues more comfortable.

14th.—Severe attack of dyspnœa last night; relieved by pulling tumor forward and painting with iodine. Must sleep in sitting posture. Feels much worse when the weather is damp.

28th.—Tumor increasing in size. Breathing much impeded. Sits in chair all night. Ordered wine and morphia.

April 30th.—The same.

May 28th.—Much suffering. Longs for death.

June 20th.—Grows gradually weaker, while tumor grows larger. Does not wish any stimulus. Omit wine.

July 8th.—Raises blood, with mucus.

28th.—Failing. Tumor largely increasing.

Aug. 20th.—Very severe attack of dyspnœa, accompanied by coldness of skin. Refuses to take any remedies, saying she wishes to die.

21st.—Attack continues, with frequent paroxysms of whooping and prostration.

22d.—Died—seven months after admission to hospital, tumor having enlarged in that time fully one half.*

Case II.—*Bronchocele originating in America; Operation; Recovery.*—(Under the care of Dr. Cheever.)—July 14th, 1865. Mary C., æt. 24, born in Ireland; resides in Boston. One year ago first perceived a tumor, a little to the right of the median line, and just below larynx. The tumor is now about two inches in length horizontally, and one and a half inches vertically. Grows very slowly. Moves with the larynx in deglutition. Tumor feels solid and somewhat movable. Causes no pain, and is not tender on pressure. Enters for an operation. Slight, temporary cough. Cough mixture ordered.

July 19th.—Under ether, a vertical incision was made over tumor, the sterno-hyoid and thyroid muscles separated, and the enlarged thyroid gland dissected out. The *left* lobe was much the largest, and long enough to lie on the carotid sheath. No very great hæmorrhage. The *right* superior thyroid artery was the largest vessel cut, although it supplied the smaller lobe. The tumor came out clean. The anterior surface of the trachea was laid bare some inch and a half. The wound was closed by silk sutures. The tumor presented all the gross appearances of the thyroid gland. It was

* The tumor, and a cast of the patient shortly after death, are preserved in the Hospital Museum.

wholly solid, and, under the microscope, showed large, oval cells—with nuclei, clustered together like bananas; and many small granular particles.

July 20th and 21st.—Doing well. Some laryngitis. Patient speaks in a whisper. No dyspnœa.

22d.—Stitches removed, and a small amount of serous-looking fluid evacuated. Some difficulty in swallowing. Hoarseness continues.

24th.—Considerable pus discharged. Cough and deglutition easier. Wound looks well. Ordered ale and beefsteak.

28th.—Very comfortable.

30th.—Wound healing rapidly. All ligatures away.

August 5th.—Discharged well—two and a half weeks after the operation.

This bronchocele obviously began in this country, and although of slow growth, had reached a size and solidity that rendered absorption under treatment difficult, if not impossible. The ready removal of it, without profuse hæmorrhage, would seem to indicate *early* surgical interference with these growths.

DR. COTTING'S ADDRESS AND DR. RICE'S REVIEW.

[Communicated for the Boston Medical and Surgical Journal.]

Dr. Cotting's address before the State Medical Society is an able and scholarly production, worthy of an attentive perusal and of thoughtful consideration. Its author has a thorough knowledge of his profession, is well versed in medical literature, and has at heart the best interests of medical science. The views which he advocates are not those entertained by the majority of physicians, and will be looked upon by many as unfounded and heretical. They may be regarded as a culmination of sentiments which for many years have been gaining ground in our profession, that the effects of medication have not been studied with sufficient care; that the natural course of disease has never been properly investigated; that drugs and medical appliances are too often used in a careless and unscientific manner, without reason or against reason, and simply in conformity with the whim or chance thought of him who administers them; in fine, that therapeutics have not kept pace with other departments of medical science.

It is not wise to ignore this skeptical tendency, or to attempt to arrest it by strong assertion and bold assumption. It will not do to assume, because a patient survives heroic treatment, that his life was saved by it; or to assert, without the shadow of evidence, in relation to a disease which, a quarter of a century ago, was treated by venesection, blisters and tartar emetic, but which now is treated with equal if not greater success without either of them, that it has changed its type, and is now less inflammatory than formerly. Medi-

cal science will not be advanced, nor doubters silenced, by loose statements, imperfect observations, or inconsequential reasoning.

But while we fully sympathize with Dr. Cotting in many of the sentiments contained in his address, and heartily bid him God-speed in his warfare in behalf of rational medicine and against the abuse of drugs, we do not at present feel prepared fully to endorse his theory of disease; or at any rate without substantial qualifications. Disease, without doubt, entered into the divine plan in the creation of man; and so did sin. The two seem to us analogous. We do not clearly comprehend the precise purpose which either of them is designed to accomplish in the affairs of the world. Whether both are eventually to disappear, or whether they will last as long as the earth does, are questions which we fear cannot be definitively answered, and which may as well be left for settlement to forensic disputants. When we get into the region of the divine plans, decrees and foreordinations, our ideas are apt to become confused and our speech ambiguous. But looking at the subject from a purely practical point of view, if the doctrine that disease is a part of the plan of creation carries with it, as a logical sequence, that no existing diseases can either be prevented in their coming, or broken up and cured when once they have seized upon us, we submit that the doctrine is hardly warranted by the facts of medical experience and is of questionable tendency.

It cannot, we think, be denied that a few diseases are under human control; and, if they still exist, it is not on account of any divine foreordination, but because men either neglect to use the power they possess in relation to them, or are ignorant of its existence. Some of these are mentioned by Dr. Rice in his review, and the list may be extended. If General Butler could banish yellow fever from New Orleans, why may it not be banished from the face of the earth? If every child born into the world were immediately vaccinated, and the operation were repeated at proper intervals of time, what would become of smallpox? Intermittent fever will attack no one who keeps away from its haunts, and these haunts may be purified so that they will no longer exhale malaria. Syphilis does not come by divine appointment. The Maplewood epidemic was plainly the result of filth and defective drainage. Scurvy depends for its existence on the want of suitable food, and tape-worms will not infest those who do not eat raw pork.

So, too, by the skilful use of remedial agents some diseases may, with more or less certainty, be arrested in their course and cured. Among these may be named intermittent fever, syphilis, psora and certain other diseases of the skin, and some forms of stomatitis and dysentery. This list, we regret to say, is not a long one.

But, after making all possible deductions, the great majority of diseases remain, susceptible of relief and perhaps of modification by medical skill, but not capable of being materially shortened or con-

trolled. What shall be said of these? Dr. Cotting's theory with regard to them may be the correct one. They may be one of the appointed means for ridding the earth of its surplus of population, and are perhaps beyond human power. But is it unreasonable to hope, even with regard to such, that, as medical science advances, their hidden causes may by degrees be brought to light, and an antidote discovered for their ill effects? In past years there has been a slow but steady advance in this direction. May we not anticipate, from the improved methods of observation and study which characterize the present day, still greater progress in the future?

Dr. Rice, in his address, makes a vigorous attack upon the theory and doctrines propounded by Dr. Cotting. His valor seems to us more marked than his wisdom or discretion. An air of superciliousness, too, pervades his discourse, which is in very bad taste, and does not add to the strength of his arguments. His statements are very positive; but his conclusions are not always very logical.

He commences with a misrepresentation. In summing up Dr. Cotting's views, he gives the following as one of them:—"Medicines, sanitary means, and medical men are just about good for nothing." Dr. Cotting, of course, neither says nor intimates any such thing, as must be evident to every one who reads his discourse.*

In order to disprove the self-limitation of pneumonia, which is incidentally asserted by Dr. Cotting, Dr. Rice reports two cases, each of which was treated vigorously, and both of which recovered. The recoveries are attributed solely to the treatment; had they been regarded as cases of a self-limited disease, and treated accordingly, Dr. Rice thinks both patients would have died.

Admitting these to be cases of pneumonia (though even this is by no means certain, the physical signs not being given), it seems strange that we are not informed whether the pneumonia was single or double. This is a serious omission, as cases of the one usually recover, while those of the other are apt to prove fatal. The first case was treated by venesection and a strong solution of tartar emetic, and on the sixth day *the whole chest was covered with a blister*; after which, the disease rapidly subsided. Now cases of single pneumonia, with symptoms as severe as those reported by Dr. Rice, usually begin to improve, under what is called the "expectant treatment," about the seventh day; after which, recovery is often rapid. What evidence is there then, that the recovery of Dr. Rice's patient was owing solely to the treatment? Our own explanation would be, that being a vigorous man, he *survived* the treatment, not that he was cured by it.

The second case lasted four weeks, and was treated by veratrum viride, squills, blisters, and, after the first few days, by stimulants. We have nothing in particular to say about this case, except that possibly Miss A. C. would have recovered sooner had the veratrum

* Pp. 371 et seq.

viride been omitted, especially as "she was a thin, pale lady," and "every symptom was of a typhoid character."

Dr. Rice will not even allow typhoid fever to be self-limited. "What observing practitioner," says he, "does not know, self-limited though it be, that very often typhoid fever, in its incipient stages, may be entirely broken up and driven from the system by the revulsive, alterative, and depurative action of a thorough emetic-cathartic?" "Who does not know that the introduction of tonics, at the proper time, will cut it short?" We might name several "observing practitioners," who not only do not know any such things, but who firmly believe precisely the opposite. We will quote but one. M. Louis certainly, if any body, belongs to this class; and what does he say? "Experience has shown that a well-marked typhoid affection is not capable of being broken up: which moreover *is not the less true of pneumonia* and other inflammatory diseases."

Can Dr. Rice mean seriously to assert that we are in possession of remedies whereby "coma, subsultus tendinum, tympanites, hemorrhage from the nose and bowels, inflammation of the mucous surfaces, &c.," can always be promptly relieved? Assertions of this sort are not infrequent in his address, and yet he tells us that Dr. Cotting "fails to perceive the great facts of our science:" "endeavors to weaken truths as old as Hippocrates himself by inculcating error, and seems to have lost a proper respect for the fundamental truths of medical science"! *Mutato nomine, de te fabula narratur.*

If arsenic be a specific in chorea, the fact is not generally known. We hope its claims will be substantiated; for chorea is very troublesome, and, according to our experience, rather obstinate, and it will be pleasant to be able to cure it "in about two weeks, in nine cases out of ten."

Other matters in Dr. Rice's address are open to criticism; especially his continued effort to convey the impression, as absurd as it is untrue, that, according to Dr. Cotting's theory of disease, judicious medical treatment is of no use; that human suffering cannot be assuaged by a careful use of drugs; and that a wise physician may not in a thousand ways administer to the comfort of his patient, and aid nature in its efforts to restore health. We will not, however, go into farther details; but will simply give expression to our conviction, that so long as the methods of practice, which seem to be sanctioned by the Franklin District Medical Society, prevail, homœopathy and its kindred delusions will continue to flourish, and the race of medical sceptics will not become extinct. W.

The Philadelphia *Ledger* and the Chicago *Republican*, two leading newspapers of the country, have determined to exclude from their columns all the obscene advertisements which the newspaper press in general is wont to parade before the world.

Bibliographical Notices.

Dictionnaire Annuel des Progrès des Sciences et Institutions Médicales (An Annual Dictionary of Medical Sciences and Institutions). By P. Garnier, M.D., &c. &c. (First Year, 1864.) One vol. 12mo., Pp. 500. G. Baillière, Paris, January, 1865.

The object of this little retrospect is the collection from all medical publications, societies and institutions, of whatever of novelty or of use has been offered to the profession during the year; and a concise but exact inventory of all discoveries, new ideas and applications that have been produced or confirmed during that time. It aims to be useful to the student as well as to the practitioner—giving a faithful reference to original sources, as well as succinct abstracts of recent investigations. A part of the object of the Dictionary is also an analysis and concentrated exposition of new books, pamphlets, essays and other documents of interest and value. In short, it is designed to be a faithful gathering up of all that the year has produced worthy of record—reduced to a form so simple and concise that he who runs may read. Surely this is no small or valueless service to the active practitioner, who, if he reads at all, must do so by the wayside. The articles are arranged in alphabetical order. A description of one or two of these, taken at random, will give an idea of the character of the work.

Absinthisme.—The disastrous effects of the intemperate use of the alcoholic liquor called *absinthe* has lately excited the attention of scientific men and the profession, as well as the public in France. Dr. Garnier gives the results of the latest experiments on the subject—those of Marcet with pure essence of absinthe, on dogs and rabbits, in whom half-drachm and drachm doses produced tremblings, stupor, insensibility, great apparent terror, and even epileptiform convulsions, accompanied by involuntary evacuations, foaming at the mouth and stertor—those, too, on the other hand, of Voisin, showing that the similitude of the morbid symptoms with those of alcohol is such as not to require for them a separate category.

To a suggestion of the *Gazette Médicale de l'Algérie* that the article in question should be taxed to prohibition, Dr. Garnier sagely remarks, "Better to enlighten consumers than thus restrain its use." We may add, in passing, that since the publication of this volume of the Dictionary, Dr. Deschamps (of Avallon), in a paper addressed to the Academy of Sciences, shows that the *absinthe* of commerce contains *no wormwood*, being colored by spinach or nettles, &c., and that under equal circumstances it does not produce more intoxication than other alcoholic drinks. According to him, the chief danger is in the excess induced by its agreeable qualities and pleasant taste.

Antagonisme.—This short article is chiefly devoted to the suspected antagonism between curara and strychnine: that between opium and belladonna being considered established. The history and effects of the Calabar bean (which, opposed to atropine, contracts the pupil of the eye, &c.) are given under the head of *Fève du Calabar*. Investigations in antagonism of different drugs are important, and might be followed up with advantage. Some years ago, a neighboring physician, Dr. Allen, of Roxbury, made a number of experiments, going to

show a decided antagonism between strychnine and prussic acid. Some of the results of his experiments were reported to the Boston Society for Medical Improvement in the autumn of 1859. In one of these experiments he gave a grain and a half of strychnine to a large dog. In fifteen minutes there were violent convulsions, and the animal seemed to be in great pain. He then gave (by syringe, forced down the throat) three drops of prussic acid. The animal became motionless for two or three minutes, then got up, laid down again and slept for an hour. After this he ran off, and was seen next day well. Other experiments were attended with similar results, though none quite so successful in ultimate restoration to life. Since then, Dr. Allen gave twenty drops of dilute prussic acid to a man who, intent on suicide, had taken about four grains, as supposed, of strychnine. The dose of prussic acid was repeated three times, at intervals of ten minutes, when the spasms abated and the patient fell asleep. He slept two hours. The recovery was immediate and complete.

Helminthologie.—An abstract of the researches of the year on Entozoa, and the treatment to destroy, or to expel them from the human body. According to Roger, cited in this article, lumbrici are continued through water taken as drink; and the reason why they are found in the young is, that children between three and ten years of age are more accustomed to vagabondize, especially in the country, drinking from right to left without regard to the source of the water. We would remark that while this may be so in part, we have been rather of opinion that the occurrence of such parasites is *the law* and their absence the exception, in young age—a question of natural history, the continuance of the parasite being as much in accordance to nature as that of its principal. The disturbances caused by all such creatures are chiefly of a mechanical character—abrasions, burrowings, perforations, &c.; all the symptoms of the "*affection trichinale*," described in this article, being due to the migrations of the parasite—the creature being harmless when free within the alimentary canal, and again "no longer able to cause accidents" when it has ceased its wanderings and become encysted. So that such "accidents" are no more entitled to be called diseases than those necessarily resulting from fire or caustic, fracture or a musket-ball.

Jurisprudence Professionelle.—The decisions of the year—against illegal practice, sale of secret medicines, extortion of unwarrantable fees, medical responsibility, the keeping of the patient's secret. The last, according to the Gironde Association, "*secret absolu, partout et toujours.*"

Pancreas.—An account of experiments to show its digestive power—its action independent of the bile, &c.

Tabac.—Tobacco, called by Prof. Bowen one of the *necessaries of life*, has, according to this article, some inconveniences attending its use, particularly in disturbing the heart's action, causing intermission in pulsations, &c. According to Decaisne seven cases of such irregularities supposed to be heart disease, out of twenty-one, were completely recovered from, after leaving off tobacco for a month.

These examples will give a general idea of the work before us. M. Garnier, says a brother-editor, has given proof of remarkable talent for analysis; he is painstaking, impartial, precise and practical, putting his eye and finger at once on the point really of interest in a

work—"en exprimant la moelle," as Montaigne said. We hope he will receive sufficient encouragement to continue the publication of the Dictionary annually. The *marrow* is what is wanted in these days of embarrassing abundance. Let us have it, as much as possible, without the envelopes: *vita brevis.*

The Renewal of Life. Lectures: chiefly Clinical. By Thomas King Chambers, M.D., Honorary Physician to H. R. H. the Prince of Wales, Physician to St. Mary's and the Lock Hospitals. From the Third London Edition. Philadelphia: Lindsay and Blakiston. 1865.

We have deferred noticing this elegant volume until we could find time to give it more than a cursory perusal, and have found ourselves fully compensated for the careful reading which the delay has afforded us. Few medical books have given us so much pleasure, few are invested with such a fascinating charm of manner, few are so full of practical suggestions of permanent value to the practitioner.

One who has not seen the book may well be puzzled as to its real nature by the singular title which it bears. So little does this express the general nature of its contents that the author, it appears, felt compelled by the criticism which it excited to drop it in his third edition. The American publishers, however, have thought it advisable to retain this *epigrammatic* portion of the original title, as Dr. Chambers styles it, on account of the great reputation which the original work obtained under its primitive designation. What, then, does this title mean as applied to a course of clinical lectures? It simply is a condensed expression of the restoration of the vital action which disease has interrupted, and which restoration is to be the principal object of the physician's study and labor in his treatment. Set at the top of the title-page, it is, as it were, the text for the volume, a principle which the author would imprint upon the minds of his readers at the outset, to guide them in their practice, however multiform and various the aspects which disease may present.

The subject of the first lecture is death and life. Not merely the final dissolution of the body, the departure of the animating spirit and the antagonistic condition, but the extended illustration of the operation of the forces which destroy and the forces which renew, as exhibited in the phenomena of disease. Death locally, as shown by the partial or complete cessation of the metamorphosis of the tissues, or life as shown by the most active metamorphosis possible. With this theme, after an interesting preliminary consideration of the general subject of death and decay in the common sense of those words applied to the body as a whole, he proceeds to take up some familiar instances of local morbid action, to show how truly they exhibit the operation of these two forces; such, for instance, as a catarrhal inflammation of the throat, or a whitlow. These are instances in which, according to the phraseology in common use by physicians, there is increased action. Heat, swelling, redness, pain—surely these are evidence enough of active vitality, of *over*-action indeed, in the minds of most; yet Dr. Chambers, by a most ingenious process of reasoning, shows that they belong to the opposite category, and should be classed among the processes of decay. Thus the redness and throbbing of the inflamed part, instead of showing increased circulation

and therefore increased life, are caused by a relaxation of the blood-vessels produced by the loss of vital elasticity. The pain does not indicate increase of vital power, inasmuch as the proper sensibility of the part is blunted, if not destroyed. An inflamed throat has lost its nice appreciation of savors, and a finger throbbing with the agony of a whitlow has lost its nice tactile sensibility. And thus the lecturer goes on from one illustration to another, keeping constantly in mind his cardinal principle, that the renewal of life is to be the guiding motive in the mind of every honest and judicious practitioner. He does not spare the nosologists, and refers with much satisfaction to the present era of our profession, when "attention seems directed to the maintenance of life *in* the body more than to the expulsion of death *out* of it."

Dr. Chambers's second lecture is on the subject of disease and cure. And here again he keeps constantly before the minds of his readers the constructive and the destructive metamorphosis of the tissues. He thinks that a physician's practical usefulness would be materially increased by habitually dividing, as far as possible, morbid phenomena into deficiencies of nutrition or constructive form-building, and deficiencies of moulting or form-destruction. With these two conditions in his mind, he shows how easily most diseases may be arranged under one of these two categories. In this he displays great ingenuity. Thus, in speaking of dropsies, he shows how students are misled by the common use of the word "effusion" as applied to collections of liquids in serous sacs. The term suggests a pouring out of too much liquid, a supposed active process which calls for interference with the view to check this excessive action. Whereas, in reality, there may be no excessive secretion at all—the membrane may even secrete less than in health—the fact being that the collection arises from the process of *absorption*, which in health is constantly going on, being arrested by the diminished vitality of the absorbing surface. In anæmia, he explains the existence of dropsical conditions by the diminished consistence of the blood, which thus interferes with the process of absorption according to the law of endosmose, by which this process becomes less active in proportion as the contiguous liquids approach each other in density. And so he goes on, multiplying the application of his principles and illustrating them in the most attractive and plausible manner, completely captivating his reader by the charm of his manner and the power of his logic. His constant regard for the powers of life is shown in the following paragraph:—"I would say incidentally, that there are few cases in which the defective nutrition is not at the same time the most important in a pathological sense as explaining natural phenomena, and at the same time the most important in a therapeutical sense, as being the most easily compensated."

We are compelled to pass over the next three lectures on the formation of pus and mucus, in which the author goes into the microscopic study of these processes, investing the whole subject with the same interest which he gives to his discussion of the nature of disease in general. We pass over them with reluctance, but a proper analysis of them would occupy more space than we can give to our entire notice.

The next four lectures are taken up with the subject of Typh Fever, a term which he applies to low zymotic fevers, whether typhus or ty-

phoid. Keeping his cardinal principle of husbanding the vital powers constantly in view, he takes his place among the most judicious class of the present day, those who use drugs as little possible in the treatment of these diseases. Believing that the poison which causes these fevers is mainly absorbed by the mucous membrane of the digestive canal, he, however, favors the use of a moderate emetic at the outset of the disease. He declares his conviction that a considerable proportion of cases may be cut short in this way, and he refers his hearers to cases under their own observation in the hospital wards, which he has thus treated, with the effect, he believes, of at once arresting the morbid process, and establishing the period of convalescence. In support of his belief that the digestive canal is the absorbing surface of the virus, he cites the statement "that during severe epidemics it has been observed that those who smoke or chew, especially if they spit out the saliva instead of swallowing it, are less liable to be attacked." After the emetic, he next pays special attention to the condition of the skin. The heat and dryness he relieves, as far as possible, by frequent sponging with tepid water, sometimes as often as three or four times daily. Next, in view of the rapid waste of nitrogenous material, he turns his attention to the supply of new matter in its place, through the organs of digestion. He begins at once with milk as the simplest and most easily-digested form of nourishment, and this he gives in small quantities at short intervals of time, sometimes as often as once an hour, but ordinarily not oftener than once in two hours; so that a patient may get down a quart or more in the course of twenty-four hours. A favorite method with our author of nourishing such patients is to give milk and beef-tea alternately every two hours, from the very first. Lastly, he looks to the pharmacopœia to see if he can find anything there logically calculated to meet the special condition of the patient. He attaches great importance to the elimination of ammonia from the patient through the lungs and skin, so characteristic of these forms of fever, an "exhalation of decay," as he calls it, growing out of a "super-alkalinity of the blood"; a condition which he cites Dr. Richardson as authority for regarding as the special cause of the typhoid symptoms. Hence the indication to counteract this super-alkalinity by the exhibition of acids. Hydrochloric acid is that which he prefers, and he employs it as his routine remedy. He gives it in a dose of twenty minims with syrup and water every two hours, and apparently with the best effect. His patients find it most grateful to them, and speak of it as making them "feel stronger." Its known antiseptic properties lend plausibility to the theory of its efficacy in these cases. Of stimulants in these fevers Dr. Chambers does not make a routine use, but employs them as an adjunct in case of great prostration or of low, muttering delirium, never in place of the true restorative, food. Finally, he contrasts the result of this treatment in the hospital to which he is attached with the results of what he calls general treatment in the same hospital. By general treatment he means, neutral salines three or four times a day, small doses once or twice a day of hydrargyrum cum cretâ at first, and later the use of ammonia, wine and ether as indicated by the symptoms. The sets of cases contrasted seem to be compared with the most perfect fairness, being taken from the corresponding months of successive years, one series covering the period of six years under

the general treatment, the other the next six years under the hydrochloric acid treatment; they were all treated by the author. The results he presents in a tabular form, and the contrast is certainly quite remarkable. As summed up, he says, "this leaves the average mortality under general treatment 21 in 107—19½ per cent., or nearly 1 in 5; under the second method of treatment, by continuous nutriment and hydrochloric acid, 3 in 121—2½ per cent., or only 1 in 40." Truly a most remarkable exhibition of results. Certainly he would appear to be justified when he says, that he cannot avoid the conclusion, that by the latter method of treatment 16 or 17 more may be saved than by the former. The same treatment employed in a very different climate, that of Shanghae, produced a similar result, reducing, according to Dr. Henderson, whom he cites, the mortality from 20 per cent. to 7 per cent.

The same wise regard to physiological principles and the laws of life characterizes the remaining lectures on Smallpox, Rheumatic Fever, Pericarditis, Pleurisy, Pneumo-thorax, Laryngitis, Pneumonia, Phthisis, &c. &c. Dr. Chambers never loses sight of the fact that physiology is, as he expresses it, the keystone of medical science and the firm foundation of medical practice. He is thus kept from regarding disease as "an effort of nature to destroy some noxious matter, and to recover the patient by expelling it from the body," and escapes the temptation to assist nature by the empirical use of drugs. His summary of his method of treating pneumonia is an illustration of this, and the cases which his hearers had seen illustrated its operation; his rules are as follows:—

I. Take blood locally, cautiously, in the early stage only, and with a distinct reference to the power of each patient.

II. Keep the chest from first to last enveloped in a jacket poultice, and allow of as little movement as possible.

III. Administer food frequently, largely, and in a liquid form.

IV. Where the nervous system is deeply smitten, as indicated by tremulous muscles, mental excitement, delirium, tawny tongue at an early stage, great depression, &c., give opium; and in some cases alcohol, but not in small repeated doses.

V. Where there is diarrhœa, stop it immediately with opium or kino.

VI. Consider antimony, mercury and purgatives as poisons in pneumonia.

The general plan of the above treatment agrees very closely with that found to be most successful in the practice of our armies during the past eventful four years. Truly, the sceptre of the *heroic* treatment of disease seems to be broken.

The "Renewal of Life" closes with several important lectures on Dietetics, Constipation, Pepsine, Corpulence, and last on Alcohol. We must refer our readers to the book itself for the admirable philosophy which they contain.

One word about our author's style. Nothing can be more attractive or better suited to his subject. Presented in the form of clinical lectures, it has all the earnestness of extempore speaking by a man thoroughly convinced of the truth of what he is saying and most anxious to impress it upon his audience. We know of no medical author, unless it be Dr. Watson, who approaches him in this felicity of man-

ner; it is as far as possible removed from dryness, even when he treats of the subtle principles of chemistry or enters into the minute details of microscopic research. We can honestly say that the book is the most *interesting* medical work we have ever read. The American publishers have done justice to the author by the beautiful manner in which they have brought out this work. Both in type and paper it is all that could be desired. We cannot but enter our protest, however, at the numerous Americanisms, or Websterisms, to speak more justly, which are to our eyes most grievous blemishes throughout the volume. *Fulfill, fiber, niter, center, saber*, and the like, have not come into such common use yet as to take away their look of impertinent innovation. We notice, too, more errors of the press than we like to see. Taking the book as a whole, we cannot too highly recommend it to the most diligent study of all progressive members of our profession.

Hypodermic Injections in the Treatment of Neuralgia, Rheumatism, Gout, and other diseases. By Antoine Ruppaner, M.D., Fellow of the Massachusetts Medical Society. Boston: T. O. H. P. Burnham. 1865. 16mo. pp. 160.

This little book contains a summary of the author's experience in the treatment of various diseases by the hypodermic method. It mainly consists of the histories of sixty cases of various affections in which pain or wakefulness were urgent symptoms. He has, however, gone beyond the application of this method of annulling pain, to the experiment of stimulating nerves in which there was deficient sensibility; and the account which he gives of the favorable effect of the injection of strychnia in paralysis is an encouragement to physicians to repeat the experiment. So little has yet been published in this country on this comparatively new method of treating such diseases, that Dr. Ruppaner's little volume meets a very general want. He discusses the questions of the superiority of this method of treatment, the classes of cases to which it is applicable, and describes the instrument which he has found the most useful, and gives the method of employing it. It is evidently a therapeutic agent which admits of very wide application. Its efficacy in tetanus and delirium tremens leads one to hope for great relief from its employment in hydrophobia, in which, as yet, we have not heard of its being employed. In the cramps of Asiatic cholera also it promises to act with a promptness which, when opiates are administered by the mouth, cannot be looked for.

Dr. Ruppaner's manual, without making any pretensions as an elaborate treatise, will be found extremely useful to the practising physician, and in many instances will supply information which cannot be got in any other way. We hope the eye of a more careful proof-reader will correct, in the next edition, the too numerous errors in the shape of incorrect names for remedies, which are the only blemishes we have found in the present one. If Latin is used in recipes and nomenclature, it should by all means be *good* Latin.

Physician's Prescription Book; containing lists of the Terms, Phrases, Contractions and Abbreviations used in Prescriptions, with Explanatory Notes; the grammatical construction of Prescriptions, &c. &c., and a series of Abbreviated Prescriptions, illustrating the use of the preceding Terms. To which is added a Key, containing the Prescriptions in an unabbreviated form, with a literal translation, for the use of medical and pharmaceutical Students. By JONATHAN PAREIRA, M.D., F.R.S. Fourteenth Edition. Lindsay & Blakiston. 1865. 12mo. pp. 298.

THE extended title of this little work fully indicates its contents. It will prove useful to the class for whom it is intended, and is a literary curiosity in its way. In the United States, we imagine, physicians make much less use of Latin in their prescriptions than our brethren in Europe do. At the present time we observe a feeling is springing up in England in favor of writing out the directions accompanying a prescription in the English language, to avoid the possibility of mistakes. It will be useful to such druggists as are not ready with their Latin grammar, and help them out of the difficulties into which they may be led by the genitive case. We once had a prescription returned by an apothecary because it contained Pulv. secalis cornuti—an article which he had not in his shop, nor did he know what it was. If it had been written Pulv. secal. corn., he probably would have understood it.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, NOVEMBER 23, 1865.

EXTRACT OF MEAT.—The value of animal food in sickness was probably never so highly estimated by our profession as within the last few years. Whether this is really due to a change in the character of diseases, or to a better knowledge of their nature, or to a fashion in medicine, we do not care at present to consider, but there can be no doubt that the necessity of stimulating food in their treatment is now universally recognized and acted upon. Without attempting to discuss either the important physiological question, how far alcohol is to be regarded and employed as such, it will be admitted by all that that form is of the greatest value which most closely approximates in its nature that of the materials taken from the body during disease, and which are essential to vital existence. The nourishment or stimulant which will restore these, in the simplest form and with the least strain upon the enfeebled organs of assimilation, is evidently the most desirable, and that portion of our daily food, which the history of all nations teaches has always been used as most effectual in sustaining the strength in health, is found also to be best adapted to this end in sickness. Animal food, however, besides the essential elements of our own organization, contains much that is rejected as excrementitious during digestion, and the mere process of separating and assimilating is a task too severe at times for the patient to perform. It is on this account that we imitate and relieve na-

ture, as far as possible, by extracting and administering in a soluble form the nutritious elements of meat in our treatment of the sick. Our readers know, however, how difficult a thing it is to make an extract of beef which shall be both palatable and sufficiently concentrated, and how quickly the patient's stomach turns against the sloppy and greasy stuff prepared in most sick-rooms and called beef-tea.

We are happy to be able to announce, therefore, that hereafter the physician may be sure of his patient's getting as good essence of beef, when ordered, as the drugs he prescribes. Mr. Borden, whose name is already so familiar to all in connection with the manufacture of condensed milk and meat biscuit, and whose preparations were used so generally in our armies, has after long trial recently succeeded in perfecting a process on a large scale by which a uniform and highly concentrated extract of beef is obtained. It differs materially from that made according to the method of Prof. Liebig, which has received such high praise from the medical profession abroad, inasmuch as it retains nearly all those important elements of flesh, the fibrin and albumen, which are wasted in the European manufacture. Without describing minutely the process, it will be sufficient to say that the results obtained by Messrs. Borden and Currie leave nothing to be desired. The first experiments were made in one of our New England States, but as it is well known that a large proportion of the most important elements of meat are lost during the transportation of cattle to market, even when their weight is not noticeably diminished, it was found impossible to extract from beef, thus deteriorated, a profitable or perfect result, and the present works have, accordingly, been erected in one of the grazing districts of Illinois, where beef of a far better quality and at a cheaper price can be obtained.

The extract is a soft, unchangeable, elastic solid, unmixed with salt or other foreign substance, and in the form of small cakes, equivalent in nutritive value to twenty times their weight of fresh beef. It dissolves readily in hot water, and furnishes at a moment's preparation a highly concentrated tea or soup, of a delicious taste and entirely free from fat. It requires no cooking, simply the addition of salt. We received, a short time since, a few cakes, which were distributed among some of our physicians, and the opinion expressed by all was that it would be of great value in the sick room, and that it ought to be placed within the reach of the profession as soon as possible. We have just received information from one of the gentlemen connected with its manufacture, that a small quantity has been sent to Messrs. Metcalf & Co., of this city, for sale, and that they now hope to be able to furnish a constant supply. Its delicious flavor, the readiness with which it may be prepared for use at night or at any emergency, the entire absence of fat, its portability, and its adaptation to the wants of the system in prostration and collapse, or in cases where solid food cannot be taken, will at once recommend it as supplying a long-felt want in the treatment of the sick.

European Schools of Medicine.—Medical education is considerably cheaper on the Continent than in this country; but for the English visitor the schools are not alike in this respect. In Paris, if he be qualified, he can attend all the cliniques, excepting some of those on

eye diseases, free of charge. In Berlin and Vienna, he will in general require to pay, but an introduction to the professor is frequently all that is required to procure admission to his clinique. Medicine and surgery are chiefly taught clinically ; the systematic lectures on these subjects being in general but poorly attended. Clinical medicine is best taught in Vienna. Skoda's clinique is very good, but his instructions are more adapted to the beginner ; whereas Oppolzer's is more fitted for the advanced student, and yet conducted with such admirable tact and skill that all can derive benefit. Oppolzer has not written much, and is in consequence not as well known in this country as he ought to be, for he is a singularly accomplished physician, *facile primus* in Vienna, and the best teacher of clinical medicine I could find in the three capitals. Frerichs and Traube, in Berlin, are both excellent. Traube is professor of auscultation and percussion, and holds his clinique at the bedside. Frerichs, who is professor of clinical medicine proper, adopts the rather unusual system of having each patient carried in bed into a large lecture-room. This plan enables every one to see the patient comfortably, and hear what Frerichs says ; but it does not admit of any but one or two obtaining a near view of the patient, or of using the stethoscope after the patient is brought in. A student is called out to examine the case, which, however, Frerichs almost invariably does for him. After a brief history has been read by one of his assistants, Frerichs remarks on the case, generally very briefly, but always to the point. The course is very interesting for those who care only for a sketch of a case ; but the time occupied by each might be extended with advantage, for Frerichs, who is a very popular teacher, just says enough to make one wish he would say a great deal more. In Paris, the physicians make but little use of the enormous materiel at their disposal. Trousseau, who has resumed his lectures on the actions and uses of medicines, and is no longer professor of clinical medicine, though he still retains his wards at the Hotel Dieu, does not attempt to teach clinically, and is in consequence accompanied by but a handful of students. His lectures on materia medica, however, attract large crowds, for he is a very prince of orators, and can render his subject not only interesting but singularly attractive. Piorry confines himself almost entirely to percussion. Barth and Beau are excellent auscultators. Bouilland still "thirsts for blood," and his clinique is in consequence most interesting to English students, many of whom pass through their curriculum without even seeing a venesection. Perhaps, however, the most instructive medical clinique in Paris is Grisolle's at Hotel Dieu ; but I must say I never could find one at all equal to Oppolzer's in Vienna.—*Medical Times and Gazette.*

Cholera.—The following account of the passage of this disease across the Atlantic in 1848, is extracted from a very valuable article in the *British and Foreign Medico-Chirurgical Review* on the Geography of Epidemic Cholera, by Dr. Milroy, President of the Epidemiological Society, London, and will be read with particular interest at this time :—

"It was in the last week in November, 1848, that it manifested itself, at sea, on board two emigrant vessels bound the one for New

York and the other for New Orleans, when they had been out the former sixteen days, and the latter twenty-seven days, from Havre, which was unaffected at the time of their departure. The circumstances attending the nearly simultaneous appearance of the disease in two vessels traversing the Atlantic, and about a thousand miles apart, are among the most curious on record in the history of epidemic cholera. The disease did not extend beyond the limits of Staten Island hospital, at New York, after the arrival of the infected ship there; but at New Orleans it seems to have spread rapidly, not only in the hospital but in the city generally, although it did not exist at the time in any other part of the United States. * * * It appeared at Memphis towards the end of December, at St. Louis in the first week of January, 1849, and at several places on the Upper Mississippi in March. Chicago and other towns, situated on the chain of the great lakes, were affected in May. It was not till then that New York was visited by the epidemic, notwithstanding the importation of the disease at Staten Island, and the occurrence of several cases in the hospital there, six months before. Nearly about the same time, Philadelphia, and the chief cities on the seaboard of the United States, became affected.

Injection of Air into Foul Abscesses and Fistulæ.—Prof. Rozer states that there is no better means of treating an abscess, the contents of which have become foul and stinking, than by the frequent injection of air by means of an elastic catheter and syringe. The patient is to be instructed to repeat this injection sufficiently often to prevent the accumulation of pus; and this operation not only adds much to comfort by removing the nauseous smells, but also seems to greatly expedite the contraction and closure of the cavity of the abscess. It is of especial benefit in the treatment of the fistulous openings remaining after emphysema, and attended with such a disgusting smell. This is speedily removed by aid of the injections, and the healing of the fistula promoted. This is often retarded for months, owing to the valvular condition of the track of the fistula preventing the free issue of the pus, which is secured by the daily passage of the catheter for the purpose of injecting the air.—*Archiv. der Heilkunde*, in *Medical Times and Gazette.*

Danger of Subcutaneous Injections.—Prof. Nassbaum, of Munich, has just published an interesting account of an accident which happened to himself. Suffering from neuralgia, he had injected morphia under his own skin more than 2000 times—sometimes to the extent of five grains of morphia in twenty-four hours. Two months ago, he injected two grains of acetate of morphia dissolved in fifteen minims of water, and accidentally sent it direct into a subcutaneous vein instead of into the cellular tissue. He gives a graphic account of his dangerous position for two hours, after which the effect passed off. He has seen similar effects in a small degree in two of his patients, and the practical lessons are, that as it may be impossible to avoid veins at all times, and one may be punctured unawares, subcutaneous injection should always be done *very slowly*. The effects are so instantaneous that the syringe can be stopped at the first sign of danger, and some of the injected fluid, mixed with blood, may even be

sucked out again by the syringe. It is very remarkable how the effects of the same dose of the same substance differ when injected directly into a vein and mixed with venous blood, and when they filter into the blood from the cellular tissue through the unbroken coats of the vessels.—*Med. Times and Gazette.*

The founder of the well-known establishment for the manufacture of surgical instruments in Paris, M. Charrière, senior, had for some years transferred his house to the hands of his son, M. Julius Charrière. The latter proved a worthy successor to his father, kept up the reputation of the name, and was highly esteemed by the medical profession. A sad blow has now been experienced by the family, for M. Charrière, jun., has just died, at the age of 35. A large concourse of medical men and friends attended the funeral, and the liveliest sorrow has been expressed at this unfortunate event.

By a royal decree, dated August 8th, 1865, a chair of Organic Chemistry has been created in the Imperial College of France. By the same decree M. Berthelot, member of the Imperial Academy of Medicine, has been appointed Professor of this chair.

In a notice of the late Dr. Valentine Mott, published in the *Archives Générales de Médecine* for September, he is said to have been the founder of a school of medicine in New York under the title *Wuivericty Medical College of New York!*

Death of M. Beau.—Dr. Beau, the eminent physician of *La Charité*, has recently died in his native place after a short illness. He filled a very conspicuous place among the medical staff of that institution.

Wm. Warren Greene, M.D., Professor of Surgery in Berkshire Medical College, has recently been appointed to the same chair in the Medical School of Maine, in place of Prof. Conant, deceased.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, November 18th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	43	27	70
Ave. mortality of corresponding weeks for ten years, 1853—1863	39.3	37.6	76.9
Average corrected to increased population - - - - -	00	00	83.75
Death of persons above 90 - - - - - - - - -		0	0

Books and Pamphlets Received.—Seventeenth Annual Catalogue and Report of the New England Female Medical College.—On the Diseases, Injuries, and Malformations of the Rectum and Anus. By T. J. Ashton, formerly Surgeon to the Blenheim Dispensary, &c. &c.—Measures proposed for the Prevention of Asiatic Cholera in the City of Providence, R. I. By Edwin M. Snow, M.D., Superintendent of Health.—A Catalogue of Medical Works on Cholera, in the Library of J. M. Toner, M.D., Washington, D. C.

Died,—At Chelmsford, Nov. 18th, Dr. Patrick P. Campbell, formerly of Lowell, aged 60

Deaths in Boston for the week ending Saturday noon, November 10th, 70. Males, 43—Females 27. Abscess, 1—accident, 2—inflammation of the bowels, 1—bronchitis, 2—burns, 1—cancer, 1—consumption, 12—convulsions, 1—croup, 3—diarrhœa, 3—diphtheria, 2—dropsy, 2—dropsy of the brain, 3—dysentery, 3—typhoid fever, 6—gastritis, 1—disease of the heart, 6—infantile disease, 3—intemperance, 1—inflammation of the lungs, 4—marasmus, 2—old age, 1—premature birth, 2—scrofula, 1—suicide, 1—teething, 1—unknown, 4.

Under 5 years of age, 26—between 5 and 20 years, 5—between 20 and 40 years, 14—between 40 and 60 years, 16—above 60 years, 9. Born in the United States, 47—Ireland, 14—other places, 9.

THE

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CLINICAL LECTURES ON AMBLYOPIA AND AMAUROSIS, BY PROF. A. VON GRAEFE.

REPORTED BY DR. ENGELHARDT.

[Translated from the Klinische Monatsblätter für Augenheilkunde, 1865, p. 129, by HASKET DERBY, M.D., Boston, for the Boston Medical and Surgical Journal.]

IN cases of Amblyopia,* three things aid us in general in arriving at our conclusions. First, the *functional state* of the eye, carefully considered; second, the *appearance of the papilla;* third, the *manner in which the affection has become developed.*

As regards the functional derangements, it is not to be denied that the amount of impairment of central vision is of great importance; although the prognosis as regards possible blindness would depend yet more on an accurate investigation of the limits of the field of vision and of eccentric sight. Experience has abundantly shown those forms which tend to progressive blindness to be characterized by an early narrowing of the field of vision, a preponderating loss of sensibility of the peripheric portions of the retina. It is, *à priori,* readily imaginable that, in a progressing atrophy of the nervous elements, those regions should first suffer which are most remote from the nutritive and functional centre, and that thus the extinction of power should be successive and, to a certain extent, centripetal.

Inasmuch, therefore, as extreme significance is to be attached to a defective or diminished peripheric vision, our methods of diagnosticating the same must be as perfect as possible. Ordinary daylight is insufficient to detect slight defects in making a general examination of the periphery of the field of vision. This must rather be conducted in a darkened room where light proceeds from but a single source. Where absolute accuracy is desirable, the "graduated lamp"† may be used; the diaphragm being set at 100, and a black

* From this class we of course exclude all those affections which proceed from visible changes in the refractive media, or in the internal structure of the eye; as also cases of neuroretinitis and embolia.

† A lamp so arranged as to diffuse a greater or less amount of light, according to the size of the opening in the movable diaphragm which is placed before it.—TRANSLATOR.

paper without glass being held before the patient (of course at a fixed distance). The limits of the field of vision are ascertained by means of white balls, set on a black rod and gradually removed from the point of fixation. To ascertain the angle of distinction in eccentric vision, the balls may be placed on the two extremities of a blackened pair of compasses.

The results of this, or a similar examination of the limits of the field of vision may be set down under three heads:—

1. Peripheric vision is relatively the same as in a sound eye.

2. Peripheric vision has suffered a diminution, equal, however, in every direction, and relatively of slighter amount than the derangement of central vision.

3. The derangement of eccentric vision is unequal, i. e., most marked in one direction, or in certain directions; extends from the edge over the surface of the field of vision, and plays no longer a subordinate *rôle* in comparison with the derangement of central vision.

In the first case we designate the limits of the field of vision as *absolutely normal*, in the second as *relatively normal*, in the third as *abnormal*. In considering cases by themselves, we will enter into a more detailed explanation of these distinctions.

Where the limits of the field of vision are absolutely normal (1), progressive atrophy, i. e., actual amaurosis, need never be suspected, provided only that the affection has in other respects properly declared itself. I do not undertake to deny that there is an initial stage where clearly defined symptoms may not yet have become developed, and it is well to avoid giving a decided opinion in a case of recent and imperfectly developed amblyopia. Suppose an instance where, within a few weeks, the acuteness of vision has fallen only to $\frac{2}{3}$, and the limits of the field of vision are absolutely normal, we are still in no condition to give a positive opinion for the possibility of a further diminution of the acuteness of vision, and ultimate encroachments on the periphery of the field of vision is by no means excluded. Has, on the other hand, an affection existed several months, and does the periphery of the field of vision remain absolutely normal, even though the marked diminution of the acuteness of vision to $\frac{1}{6}$, $\frac{1}{10}$, or even less, shows the settled nature of the difficulty, we may safely conclude that the process is not one of progressive atrophy (amaurosis). And thus it may be seen that we are unable to approach a comparatively light case without some degree of apprehension, and yet may give a favorable opinion in an apparently graver condition of things. In speaking, however, here of a favorable prognosis, I wish to be understood as referring only to the approach of amaurosis, and not of an entire recovery. We meet a variety of amblyopic conditions, where the periphery of the field of vision is intact, but where central or eccentric scotomas exist, which baffle all treatment and, after reaching a certain height or

diminishing within certain bounds, remain permanent. Of this, more hereafter.

If the field of vision is *relatively normal* (2), i. e., if an equal loss has taken place in all portions of the periphery, slight in comparison with the derangement of central vision, the affair is a dubious one. We may get information from a simultaneous glance at the optic nerve, the age and the manner in which the disease has developed itself, but not from the functional derangements alone. Considered by itself, this form is by no means a serious one, being the same that occurs in loss of retinal sensibility; for example, in long-continued cases of loss of vision of one eye, and may be artificially produced by bringing a piece of deeply smoked glass before the eye. Just, then, as eyes excluded from the act of common vision by a cause still in force—strabismus, for example—may have eccentric vision outwards predominate over that inwards, and finally over the central, and may thus become progressively amaurotic, so we see, in the case of amblyopic eyes with a relatively normal field of vision, the cause of the disease still existing (as in the case of drunkards), that progressive atrophy may result. On the other hand, we may witness complete restitution, as in anopsia. In fact, where the field of vision is still relatively normal, we are not dealing with a characteristic case of progressive atrophy. A rational and discriminating system of treatment is here specially called for.

And, finally, if the limits of the field of vision be *abnormal* (3), the case assumes a more threatening aspect; though it would be going much too far to regard all belonging to this class as necessarily tending to a fatal termination. We have to first take into account the manner in which the field of vision is contracted, next to compare this with the acuteness of vision in the centre of the field; thirdly, to regard the appearance of the papilla; fourthly, the manner of development of the disease. The last two points will be considered in another connection. The following remarks pertain to the first two.

If the limitation of the field of vision be on one and the same side of the body, for example on the right (or right and downwards, right and upwards), and if central vision is normal, or nearly so, then only one tractus opticus is affected. The disease, as such, may end in complete hemiopia on corresponding sides, never, however, in blindness (Case IV.). An extremely exceptional state of things (and one that admits as yet of no anatomical explanation) is the finding of limitations in the field upwards or downwards, on one or both sides, in the last event symmetrical, which, when they occur separated by a sharply-defined boundary from that portion of the field retaining its normal functions, and when vision is of normal acuteness, give no reason for suspecting progressive atrophy. Actual concentric narrowing of the field of vision sometimes may be observed to result in blindness, the field growing gradually smaller, but preserving its form (as in exceptional cases of glaucoma), al-

though such a state of things seems in general to depend on causes which may be arrested in their operation and even removed. The latter may with some confidence be looked for when the papilla has preserved a normal appearance, when the acuteness of vision has become only moderately impaired, and when by the use of dark blue glasses (shade No. 6 to No. 8) a partial increase of peripheric vision may be effected (as in hysterical anæsthesia of the retina and a peculiar form met with in nervous children). The most unfavorable cases are those where an irregular lateral contraction of the field of vision has taken place, attacking the two eyes either simultaneously or successively, and after such a fashion that the periphery of the field of vision becomes principally impaired inwards or outwards (or in an intermediate direction, outwards and downwards, inwards and upwards, &c.); I say *principally* impaired, for besides the marked contraction on one side there is generally a lack of distinct perception in other directions. The principal distinction between these limitations and those described in hemiopia consists in the fact that the portion whose function has become impaired is never separated by a sharply-defined line of demarcation from a part retaining its normal functions, but that a gradual transition takes place through a tract the activity of which grows greater towards the centre and less towards the periphery. The graver forms of amaurosis generally run such a course as to have seriously affected the first eye, having caused, for example, the contraction of the field of vision to have already passed the point of fixation, when the second eye begins to be involved (see below). For, in order to be assured of the soundness of the second eye, its field of vision must be closely scanned in that quarter where ominous symptoms are most to be feared. Was the first eye first invaded by a cutting off of the field of vision downwards and inwards, the periphery of that of the second eye must be carefully watched in the same region, and so must the temporal border if the temporal side of the other eye was first affected. These observations are all the more essential because, why we know not, an interval of several or even of many years often elapses between the affection of the two sides, while, on the other hand, one may follow on the heels of the other. It most frequently happens in amaurosis that the first derangement occurs on the nasal border of the field of vision, and that the temporal half holds out the longest. This may be owing to the anatomical arrangement of the optic-nerve expansion and to its physiological consequences, inasmuch as that lateral portion of the field of vision which belongs to each eye for itself is furnished exclusively by the distribution of the fibres on the nasal side. Although, indeed, in processes involving atrophy, so many cases occur where an exactly opposite condition of things is found, viz., the occurrence of the first derangement in the temporal half of the field of vision, that we cannot, as in glaucoma, name them exceptions to a general

rule, but must rather look upon them as in the minority. Should it happen that the second eye should not become affected on the same side (medial or temporal), but rather on the opposite, i. e., the side corresponding with that side of the body, the case might, as in the former instance, be one involving only one tractus opticus, developing itself successively in the fasciculus lateralis and cruciatus, and threatening consequently not blindness, but only hemiopia on corresponding sides; in this hope, however, we only dare indulge when, 1st, the limitation of the field of vision on the first eye does not cross the vertical line of separation passing through the point of fixation; 2d, when the acuteness of vision has not materially diminished, perhaps not below $\frac{1}{3}$ or $\frac{1}{4}$. If the case be otherwise, this mode of development, relatively infrequent though it be, must excite the suspicion of approaching atrophy.

Is the survey of the *periphery of the field of vision* of the first importance as regards progressive atrophy, so, on the other hand, may we deduce from a knowledge of its *continuity* very important inferences as regards the question of recovery. It may be generally laid down that those cases of amblyopia in which the continuity of the field is nearest its normal state, offer the best chance of recovery (Case I.). Accordingly if, with a diminution of the acuteness of vision, we find the eccentric acuteness correspondingly affected, so that, in accordance with the common law, it gradually diminishes towards the periphery and does not in certain spots undergo interruptions or sudden diminutions, we are at liberty to form a more favorable prognosis than if central acuteness of vision had been impaired over a defined spot, sharply separated from the surrounding parts (central blur, central scotoma, central defect), or if a slight impairment of acuteness of vision were accompanied by eccentric interruptions. Causes of disease seem often to be at work, in the case of central or eccentric scotoma, which lead to a permanent impairment of sensitiveness. We often witness, at any rate, the persistence of such a state of things, and are therefore in a situation to give a prognosis only favorable as regards blindness, doubtful as regards ultimate recovery (Case III.). In such cases the state of the papilla and the course of the disease afford us more tangible information. I again insist on the fact that, in order to give a favorable prognosis as regards blindness in cases of central and eccentric scotoma, we must have a satisfactory amount of eccentric vision beyond the scotoma, especially towards the periphery of the field. But if the case be one of scotoma, beyond which and in certain directions, even to the periphery of the field, the eccentric vision has become impaired, we have generally to do with a form of progressive atrophy (Case V.). So, too, must we carefully investigate cases of eccentric scotoma, occupying corresponding places in the field of vision, for example, on each side the lower part. If the eccentric vision in the neighborhood of the scotoma, in the last-cited case below, is entirely

normal, blindness is not to be feared, indeed the capacity of the layer of fibres corresponding to the scotoma must be normal. If the case be otherwise, such a derangement is not infrequently the precursor of an amaurotic affection.

Beside the diminution of central and eccentric acuteness of vision, many other features of amblyopic affections have had more or less importance attached to them as influencing the prognosis. This was particularly the case before the invention of the ophthalmoscope, when it was impossible to accurately distinguish amblyopia, in the present sense of the word, from affections of the internal structures, from inflammations of the optic nerve, and even in part from impairments in the transparency of the refractive media. Since the classification has been completed, the worthlessness of most of these symptoms has become manifest. Let me briefly refer to some of them. The *subjective appearances of light*, both plain and colored, as also in the form of subjective pictures, occur to any extent in comparatively few amblyopic cases, and, when present, give more information as to the accompanying condition of the brain itself (as in encephalitis, delirium tremens) than as to the state of the amblyopia. Vastly more importance is to be attached to these phenomena in diseases of the deep-seated membranes, as they here not only sometimes indicate the duration of the progressive periods, but are even of importance as prodromal symptoms (as, for example, in cases of separation of the retina, where they may occur as white balls, drops, or in crescentic shapes, which I attribute to the tension near the equator). The weight laid on these symptoms formerly in cases of amaurosis is due in great measure to the fact that these cases were confounded with affections of the deeper structures. Again, these appearances may be present in their most intense form in an affection, which (so far as it occurs idiopathically, involving neither the field nor the acuteness of vision) may be of some significance as relating to the cerebral economy, but never passes into amaurosis; I mean the so-called hyperæsthesia retinæ. In cases of genuine amblyopia, misty or smoky vision is most intimately connected with a diminution of the central or eccentric acuteness of vision, and often only the direct indication of this on the part of the retina.

It is at this day hardly necessary to state that the pronounced mouches volantes we often meet in normal eyes (*myodesopsia*) are in no wise indicative of amaurosis. Their cause is partly optical, alterations of the state of refraction, of the range of accommodation, irregularities in the refractive media all facilitating the production of entoptical shadows of diffraction, partly depends on hyperæsthesia of the retina, where shadows ordinarily invisible are brought out by the attention concentrated on them.

The *favorable influence of convex glasses* in amblyopia, as facilitating the recognition and survey of letters, has been used to aid the prognosis. This experiment, leaving out of account any mere correction of refraction, may be used in some cases to demonstrate the continuance of the acuteness of vision, and the full activity of the retina at its centre, gives us, however, in the end, no results that we could not have obtained from the examination of the central and eccentric vision.

The old division of amaurosis into *active* and *passive* has practically passed away; although it is not to be denied that in different forms, the relations of the acuteness and field of vision being apparently the same, the capacity of perception is very differently affected by the amount of illumination, and that in this sense we may be said to be dealing with active and passive forms. It is well known that, in the case of a normal eye, the amount of illumination may vary within tolerably wide bounds; for example, from bright daylight to much less, without exerting a perceptible influence on the acuteness of central or eccentric vision. It first becomes felt (in accordance with a yet undiscovered law) when the amount of illumination is reduced within certain bounds—for example, approaches twilight. In the case of amblyopic eyes we find considerable fluctuations often produced by slight changes in the amount of natural, and generally by greater variations in the amount of artificial light. Where a decided diminu-

tion is thus observed, we are justified in speaking of torpor of the retina in connection with the other circumstances of the case. Taking into account the prevalent amount of central and eccentric vision, this "torpor" consists in an abnormally rapid diminution of each (or particularly of eccentric vision), the amount of illumination being diminished. On the other hand, cases are to be met with where perception is not diminished, or is even increased by a withdrawal of illumination that normal eyes would sensibly feel.* In these rare cases we find that in the twilight or while looking through deep-blue glasses distinctness of vision increases, and we may therefore contrast them as active forms with the more strongly-marked passive, and this all the more because, other things being equal, the prognosis is better.

Color-blindness, a not infrequent accompaniment of amblyopic affections, has been recently carefully investigated by Benedict, and especially by Schelske. That it is of any nosological use is, up to the present time, neither possible nor probable, inasmuch as Benedict declares that the pathological color-blindness may give way without any special alteration in the power of perception.

Some, following in the footsteps of Serres d'Uzès, would find a thorough means of diagnosis in the examination of the *phosphenes* produced by pressure. This method is, however, here even less admissible than in cataracta complicata and closure of the pupil, inasmuch as in the unimpeded open determination of the powers of vision we possess a method at once more delicate, better calculated to directly ascertain the true nature of the disease, and more easy to carry into execution. Only in rare cases of peripheric anæsthesia (as, for example, where concentric narrowing of the field of vision occurs in connection with a sudden failure of cutaneous sensibility) are we forced to the interesting conclusion that phosphenes may be produced by pressing against portions of the retina that are insensible to light. In my opinion the solution is to be found in a loss of connection between the layer of rods and the nerve-fibres, and in such a case we may look upon the existence of the phosphene, taken in connection with other circumstances, as rendering the prognosis more favorable.

Finally, an attempt has been made to levy, for diagnostic and prognostic purposes, on the results of galvanic stimulation, and Remak has recently published some communications of much interest, the continuation of which we must await, on the different reactions with regard to colors of the centre of the optic nerve in various cases of amblyopia.

We turn now to the second head, namely, the *condition of the optic-nerve entrance.* We are indebted to the ophthalmoscope for having not only set defined bounds to the class of amblyopic affections by the exclusion of other intra-ocular diseases, but also for having discovered in the state of the optic papilla diagnostic marks of much importance in separate cases. Our attention is to be paid to four characteristic points, closely connected together and partially dependent the one on the other, viz. (a), *alteration in color;* (b), *opacity;* (c), *excavation;* and (d) *diminution of the calibre of the vessels.*

[To be continued.]

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* In order to be exact in these statements many details must be added, and above all the intensity (I.) of illumination which is to be placed at the head of the scale of gradually decreasing amounts of light. If a large amount of I. is taken, as much, for example, as would be represented by intense daylight, many amblyopic eyes possessing but confused vision would, as this intensity is decreased, at first seem to lose no distinctness of perception, and only show signs of "torpor" after still further diminution. The remarks in the text above refer to that decrease in central and eccentric vision which follows when we descend the scale from ordinary daylight to that amount of I. which was recommended to be employed in the more delicate examinations of the field of vision.

CASE OF CEREBRO-SPINAL MENINGITIS.

[Communicated for the Boston Medical and Surgical Journal.]

Messrs. Editors,—The following synopsis of a case of cerebro-spinal meningitis possesses some points of interest, and I offer it as a slight contribution to the history of the disease.

The case was partially reported at the July meeting of the Norfolk District Medical Society.

Albert F., a stout healthy child of four years, was attacked with chills and other premonitory symptoms on the fifth day of May last. He had played a good deal around water standing in the street and in the half-open cellar of an unoccupied building, and for two or three days had complained of fatigue and aching of limbs. When first seen on the evening of the fifth, his aspect was dull and mind somewhat wandering; was irritable when roused, and when questioned complained of frontal headache; skin hot; pulse 140. The following morning, these symptoms were all much ameliorated, though he had had a restless night. At this visit noticed on the body and neck bright-red spots about the size of a pin's head, not elevated, and permanent under pressure. There were a few scattered over the surface of the chest and abdomen, while on the right side of the neck there were two irregular clusters of them, and another over one of the lumbar vertebræ. The clusters were each about the size of a three-cent piece, and, when they first appeared, were somewhat suggestive of a blow from a fine nutmeg-grater (to appropriate the comparison of another writer on this subject); since each spot in the cluster had a deep-colored central point, while its paler areola was nearly or quite coalescent with those of its neighbors. The patient continued rational and comfortable during the forenoon, though vomiting fluids when taken; but about one o'clock, P.M., he began to grow worse, and at two, I found him unconscious, motionless, head inclined backwards, pupils rather contracted, face pale, surface cool and covered with sweat. The petechial spots were changed to a dark livid color. The tonsils were somewhat swollen, and the fauces injected; tongue covered with a dirty, yellowish coat; pulse about 112, but very irregular; respiration, 52. Towards evening he rallied from this condition and the spots became brighter; had a free dejection after medicine and enema. Fever returned, and consciousness was restored until about midnight, when he grew delirious, and his head was drawn still further backwards.

During the 7th, he was restless and talkative, and the first part of the day delirious; answered questions, and said that his head ached; pupils variable, yielding slowly to light; pulse irregular, intermittent, and very variable, ranging from 100 to 140; had two small dejections. The urine, examined in the evening, was acid, contained *a trace of albumen* and *no chlorides*.

8th.—Symptoms much the same. Still restless; mental condition

dull, without delirium; head drawn far back; neck stiff; gives signs of pain if it is moved; swelling of throat subsided. Towards evening the pulse became more steady, being about 108, and no intermission noted.

9th.—Latter part of night, restless and flushed; pulse quick. Urine was strongly acid, and yielded a *copious precipitate of albumen* both to nitric acid and heat; *chlorides re-appeared in small quantity.* During the forenoon the patient became stupid again; pupils contracted; pulse irregular and intermittent. Later in the day he was more intelligent; lay quiet for the most part, but tossed his arms and uttered fretful screams at intervals; pulse more regular; urine passed involuntarily.

10th.—Had a steady, quiet night by aid of opiates; pulse 108; respiration regular, easy and less frequent. Urine highly acid; no excess of urates; no albumen; chlorides nearly normal. In the afternoon, comfortable; skin moist; pulse 120.

11th.—Had a quiet night without opiates; mind clear; pulse 112; urine normal. During the day, no sleep; talked excitedly; was apprehensive of snakes, &c.

12th.—During the night slept quietly by aid of medicines. Pulse, at visit, 120 or upwards.

13th.—Had a quiet night; slight motion of head causes pain, but neck is more flexible and head less drawn back; the spots have disappeared; pulse 134; tongue cleaning a little; asks for food from the table.

15th.—Condition about the same; has a scarlet rash on body and limbs.

17th.—Rash distinct yesterday, to-day faded; tongue cleaner; pulse still variable.

18th.—Loss of flesh becoming very apparent; is impatient and irritable; slight noises disturb him; muscles of neck less sensitive, but powerless; head falls backwards if not supported.

22d.—No perceptible gain of strength; skin sometimes dry and hot, but perspires easily; tongue has a thin, yellowish coat; appetite small and capricious.

June 24th.—The patient's general condition for a month past has been as follows:—Temper irritable and excitable; ears very sensitive to noises, and eyes to light; frequently complained of headache, indicating the back part oftener than the front, as its seat; would utter sharp, fretful screams at intervals, and toss his limbs until exhausted; required opiates in some form nearly every night; pulse generally regular, but easily quickened, varying from 100 to 130 or more; had little appetite, declining, successively, broth, eggs, milk and most farinaceous food; tongue dryish, and either covered with a yellowish fur, or congested after cleaning in flakes; bowels constipated. About the first of June he teased for, and received from the table, a bit of tripe, which caused great distress at stomach, and

was finally ejected. Since that time, he has had attacks of vomiting one day in three or four, each of which seemed to leave him somewhat weaker. On such days little was retained by the stomach, and the patient asked for nothing. The vomiting was without effort or pain, and there was little or no nausea, and no tenderness on pressure at epigastrium. The last attack of the kind occurred yesterday, and was severer than any previous one. It left the patient much prostrated, almost insensible, with a very weak and intermittent pulse. He has now rallied somewhat, but the stomach is still irritable; pulse 120, more regular. His body is wasted to a mere skeleton; skin shrivelled, dry and harsh; hands tremulous; muscles of spinal column nearly or quite powerless.

27th.—Seems to have recovered the ground lost by last attack of vomiting; tongue clean, but congested; yesterday refused beef-juice, but took a piece of bread; to-day he asked for, and took with relish, a piece of broiled steak to chew; had natural dejections yesterday and to-day.

28th.—Aspect improved; countenance placid; appetite beginning.

Oct. 5th.—From date of last record, the history of the case has been that of a slow but steady convalescence. The patient's temper almost at once became comparatively placid, his sleep refreshing, his appetite uniformly good, his power of digestion and assimilation adequate, his bowels free and regular. He gained flesh slowly and strength still more slowly, but wholly without tonics or any aid from medication. It was weeks before he could stand, and weeks longer before he could walk, without assistance. There was not only muscular weakness to be overcome, but a partial loss of coördinating power, so that the art of walking had to be learned as in infancy, slowly and with difficulty. It is only within two or three weeks past that all traces of this infirmity have disappeared from his gait. He is now heavier, and apparently as strong and healthy as before his sickness.

Treatment.—The principal internal remedies were as follows:—An active cathartic at the outset, and enemata subsequently during the course of the disease; opiates, and occasionally aconite or veratrum viride *pro re nata;* permanganate of potash, one sixth of a grain every hour, until May 12th, after which it was given less frequently, and omitted altogether on the 17th; quinine and acid during the early part of the period elapsing between the subsidence of the acute symptoms and the establishment of convalescence; and oil of turpentine later. Whiskey was given once or twice during the acute stage, but not well borne. No other alcoholic stimulant was used until the last attack of vomiting, when brandy was given a few times in mucilage of gum acacia, and proved acceptable. Throughout the acute stage the patient was plied with beef-juice at short intervals. The external applications were used assiduously, and consisted of cool or ice-cold water to the head; sinapisms to the limbs,

and, early in the disease, to the nucha; a liniment of chloroform, aconite and alcohol to the neck and spine, with friction; subsequently oil of turpentine to the same region; turpentine stupes to the epigastrium during the vomiting attacks; and general sponging with tepid water for its sedative effect, when needed.

Remarks.—A few words in regard to one or two of the prominent symptoms. During the delirium or hebetude which was present in the early part of the disease, the patient's attention could generally be fixed or roused long enough to obtain an intelligent answer to a question. His mind, when wandering, reverted to his previous occupation, and he was understood to talk of his play, his garden, &c. He saw snakes on one day only, and that after the period of mental disturbance had seemed to be ended. The result of the several examinations of the urine was progressively interesting and valuable. It gave me confidence to pronounce the seeming though doubtful amelioration of the symptoms which took place concurrently, to be a real change for the better. I regarded it as indicating clearly the culminating point of the disease, although I shall not presume to offer an explanation of the phenomena.

The patient was frequently seen by Dr. C. C. Holmes, in consultation, during the first days of the disease, and to him the successful issue is very largely due. Yours, Jas. S. Greene.

Dorchester, October 5th, 1865.

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

Oct. 9th.—*Anencephalous Fœtuses.*—Dr. Jackson showed two specimens, one of which he had received from Dr. A. B. Bancroft, of Charlestown, with the following memoranda:—The mother is an American, and has had two healthy children. Labor occurred Oct. 8th, not having been expected till Dec. 1st. Quantity of liquor amnii large. Child stillborn, after a labor of six or eight hours. Sex, male. Quite fresh and plump. Varus of both feet.

The following account of the dissection was subsequently furnished by Dr. J. Wyman:—The fœtus was a foot in length, weighed 2 lbs. 6 oz.; the body and limbs were well formed, the face had the usual features of anencephali, and the ears were bent forwards so as to cover the auditory openings.

The spinal column was fissured to the sacrum, and the vault of the cranium was wholly wanting. The walls of the cranio-spinal canal were everted, so that their inner faces everywhere presented outwards and backwards.

The integuments were continuous with the membranes covering the surface of the fissured canal. These consisted of a thin and highly vascular membrane, on the free surface of which there was, at the lower

part, a thin deposit, resembling the substance of the cord; this contained no nerve-tubes nor caudate cells, but consisted chiefly of granules; below the pia mater, the fœtus lying on the abdomen, was a free space, the cavity of the arachnoid, and below this a thick membrane, having unequivocally the structure of the dura mater; this, too, adhered by its edges to the integuments of the body. That the membranes above mentioned are the ones indicated, is proved by the arrangement of the roots of the spinal nerves; these, passing through the intervertebral foramina, perforated the thicker membrane (the dura mater), traversed the space between it and the inner one, or pia mater, in which last they ended, without projecting upon the free surface. They were easily traced in all parts of the cord, the posterior roots being attached along a line further outwards laterally than the anterior. A conception of the whole arrangement may be had by supposing the spinal canal and membranes split open on the back, the cut edges everted and united with the skin, and the whole cord removed, and thus emptying the pia mater. The visceral surface of the pia mater would then become superficial.

A similar condition was found in the head. The vascular membrane, or pia mater, was prolonged over the base of the skull, and several of the nerves, as the sublingual, the accessory, the vagus, the fifth pair, and the motor communis, were traced into it, just as in the spinal cord. The fourth, sixth and seventh nerves were not traced, nor the auditory or olfactory. The optic nerve passed beneath the anterior cliroid processes, which were strongly bent back, and seemed to unite with each other, but were not traced to the membranes. Beneath the pia mater, on each side the cella turcica, was a mass of connective tissue infiltrated with blood, but in which no cerebral substance was detected, nor would one expect to find any, since it was outside of the pia mater, i. e., between it and the base of the cranium. The pituitary body occupied the usual place, and had on its upper surface a papilla, which seemed to be a part of the infundibulum.

For observations in relation to the origin of deformities similar to the above, see printed records of the Society for April 28th, 1862.

The other specimen was sent by Dr. Daniel V. Folts, of East Boston. The mother was an Irishwoman, about 20 years old. Labor occurred at the completion of the sixth month of gestation, lasting four days. The face presented, rendering the labor difficult. Liquor amnii very profuse. Motions felt during labor. The child (her first) was stillborn. It was Dr. F.'s second case of anencephalous fœtus in a practice of over twenty-seven years.

Dr. Wyman remarked, that in this case the anencephalism was complete, but the spinal canal was not fissured, except at the upper part of the cervical region. The base of the cranium was covered with a vascular membrane (pia mater), beneath which there was loose connective tissue, infiltrated with blood and serum, especially on each side of the cella turcica. There was no appearance of cerebral substance.

Oct. 23d.—*Case of Pelvic Hæmatoma, on which Pelvic Cellulitis supervened.* Dr. Sinclair reported the following case:—

"Mrs. R., æt. 30, in good health, nursing an infant over twelve months, had her catamenia appear for the first time since the birth of her infant in the latter part of August, lasting one week, in average

quantity, but for two weeks more was obliged to wear a protection against the continuance of a few drops. In this condition she came to this city from Charlestown, to engage a servant girl at an intelligence office. While returning home, she was suddenly seized in the street with severe and tearing pain in the pelvis, accompanied with profuse hæmorrhage, from which she fainted. She was carried home in an exhausted condition. The hæmorrhage soon moderated, but still continued more freely than at any former catamenial period, and the pelvic pain disappeared. She had medical attendance from the commencement of her trouble in August, and, from report, various means were tried to arrest the discharge, but no vaginal examination had been made previously to my seeing her, on the 17th of September. Then her pulse was 88, no fever, no great pain on pressure over hypogastric region, some difficulty in passing water, slight nausea, fair appetite, costiveness, sacral pain and moderate menorrhagia. Touch, *per vaginam*, revealed a considerable tumefaction, with some pain, at the back of the cervix uteri, extending in the direction of the right groin. This swelling, though not felt externally, was distinctly recognized by combined external and internal examination. At this stage of the disease it was difficult, perhaps impossible, to decide whether it was a pelvic cellulitis or a hæmatoma, although the history of the deranged menstrual function was in favor of the latter. With the view, however, of possibly arresting the further progress of the affection, leeches were applied to the anus, and the case otherwise treated as one of cellulitis. The result was unsatisfactory, on the whole, except that the menorrhagia discontinued after the leeching.

"Matters remained about the same for some days, and, with the exception of difficulty in relieving the bladder and bowels, the patient was very comfortable. Some purulent matter was reported to have been discharged per rectum, at one time, followed by great relief to the dysuria.

"Sept. 28th.—Had a paroxysm of severe pain in the pelvis, which she described as 'tearing her apart,' followed by nausea and vomiting, and feeling of suffocation. She became so extremely prostrated that those around thought her dying. Examination of the retro-uterine tumor found it greatly increased in size, pressing the cervix uteri forward against the pubes, and rendering the uterus nearly, if not quite immovable.

"29th.—Dr. Cabot was called in consultation with regard to the propriety of puncturing the tumor. The decision was against interference, for the time at least.

"The retro-uterine mass remained for a time unchanged, round and elastic to the touch, filling up the posterior part of the pelvis between the cervix uteri—which it pressed against the bladder and pubes—and the rectum, which it pressed upon posteriorly, giving rise to extreme difficulty, with considerable pain, in discharging the urine and fæces.

"Oct. 7th.—An exploration of the tumor was made with Poteau's needle, which entered the mass without pain or difficulty, and gave vent to a little dark blood.

"10th.—Swelling very distinctly felt in right groin for the past two or three days. Now, considerable constitutional irritation. Great tenderness, on pressure, over the whole of the pelvic region, but par-

ticularly the right side; nausea and vomiting, and distress at pericardium. Pulse 114.

"12th.—Dr. Storer saw the patient, last evening, in consultation, but on account of the rapidly extending inflammation, advised non-interference. Swelling now found extending to the crest of the ilium, occupying the entire iliac fossa, and bulging distinctly as it approaches the middle line of the abdomen. The left groin is more full than natural, and tenderness on pressure, with fulness, extends almost to umbilicus. 'Tearing pains' in pelvis. Pulse 124. Nausea, vomiting and epigastric distress. Bowels and bladder relieved since yesterday. No hæmorrhage from vagina for past few days. Keeps constantly moaning.

"14th.—Felt unusually well this morning until 11 o'clock, when she got up to use the night chair, during which act she undoubtedly strained considerably, as usual since her illness, and immediately exclaiming that something had torn within her. She became so prostrated that she was unable to move; an intolerable burning pain in the abdomen and left hypochondrium followed, requiring large and frequently repeated doses of morphine to relieve her distress. From this exhausted condition she never rallied, retaining full possession of her senses till death ended her sufferings, at 3 o'clock on the following morning.

"Unfortunately, no *post-mortem* examination could be obtained."

Oct. 23d.—*Death, preceded by Spontaneous Mortification of the Right Nates.*—Dr. Gray reported the following case:—

"I was called to attend a young woman of very delicate appearance, 19 years of age, in premature labor, on the 15th of September. She did well. Some five or six days afterwards, my attention was called to the right breast, which was twice as large as the left, a good deal discolored, and pitted on pressure. A mammary abscess was diagnosticated, though there had been neither pain nor throbbing at any time. It was opened, and discharged about two ounces of pus. My visits were discontinued, and the patient, as was afterwards ascertained, soon went about house, and took her meals with the family.

"On the 10th of October, I was called to see a discoloration on the right nates. There was a black spot, circular, and three inches in diameter, with great pitting on pressure at the part, and for some distance in the neighborhood. There was no pain. An abscess lancet was introduced its whole length, but nothing escaped save a little bloody serum. The blackness gradually extended, fœtid discharges came from the vagina, and the patient died in about a week. No continued pressure or blow was ascertained to have taken place."

Oct. 23d.—*Femoral Hernia; Strangulation; Sloughing, and Opening externally; Death on the 28th Day.*—Dr. Jackson showed the specimen, and read the following history of the case, which he had received from Dr. James M. Nye, of Lynn.

"The patient, a female, 40 years of age, had had a tumor in the left groin for the last five or six years. From the size of a chestnut, it enlarged until it extended nearly from the spinous process of the ilium to the symphysis of the pubes, and below Poupart's ligament, its length being four inches and its diameter two inches.

"During the last four years she had had several attacks of colic, which yielded to the usual treatment; the inguinal swelling being re-

garded by different physicians as glandular. This last was at such times a little enlarged; and it was always a little sore, so as to embarrass locomotion.

"On the 13th of September she had a violent attack, that came on after eating some raisins. Until the 15th, she received only domestic treatment, and I was then called. There was great soreness over the abdomen, as from enteritis; and the swelling was slightly increased. The usual remedies produced relief; and on the 17th she had a discharge from the bowels, in which were the skins and seeds of raisins. The vomiting, which had been frequent since the 13th, ceased on the 18th, 19th and 20th; but on the 21st, 22d and 23d it occurred once daily. There was fluctuation and great pain in the swelling, with hectic and prostration. On the 23d it was punctured, and there was a large discharge of semi-fluid and semi-fæcal matter, which continued till death; there having been no natural dejection after the 17th. In a few days after the swelling was punctured, a large mass of sloughing tissue appeared at the outlet, greatly impeding the discharge of the fæces. This was cut away at different times, and was thought to be omentum—an epiplocele of some years' standing; an idea that seems to explain the nature of the swelling, and sets aside that of glandular enlargement. For a time after the opening was made she rallied; but a typhoid state gradually came on, and she died on the 11th of October."

The specimen shows a portion of integument in which is an opening about two inches in length; beneath this a cavity that would hold perhaps half a pint. Into this last, two portions of intestine open directly and largely; but there is no appearance of gangrene about them, nor upon the inner surface of the cavity, excepting one slough, and that not a large one. There is an old and strong adhesion of the intestine at the neck of the sac, and by the side of it a small portion of omentum.

Nov. 13th.—*Strangulated Hernia; Operation; Recovery.*—Dr. Wheeler reported the case. The patient, a woman 65 years old, had for some time suffered at intervals with colicky pains in the abdomen, constipation and vomiting. She had been suffering several days with an aggravation of these symptoms, before Dr. W. was called, but had had less vomiting the day previous, and had had one dejection. She was very restless, tossing about. On examination there was a tumor, the size of a hen's egg, in the inguinal region, which was of several years' standing. Dr. W. made an attempt to reduce it, but without success. He therefore etherized the patient, and cut down upon the sac, which on being opened revealed a stricture high up, and a gangrenous mass of omentum, the line of demarcation being well defined. He removed the gangrenous portion, and the patient recovered. Had nothing been done, an abscess would probably have resulted, as in the specimen shown at the last meeting by Dr. Jackson.

Nov. 13th.—*Hydrothorax complicated with Pneumonia of the opposite Lung; Paracentesis; Recovery.*—Dr. Bowditch said he had seen, in consultation with Dr. Thorndike, of East Boston, a youth, 17 years old, who had had all the signs of fluid in the right chest for six weeks, and who was seized with pneumonia of the opposite lung, expectorating large quantities of bloody sputa. The dyspnœa was extreme. An immediate operation of paracentesis was advised as the only chance

of relief from approaching death. Dr. Thorndike accordingly punctured the chest on the right side and drew off five pints of serous fluid. The dyspnœa was relieved almost at once, and the pneumonic symptoms yielded in a few days. Dr. Bowditch had never met with such a complication before; and he hoped Dr. Thorndike would report the case more in detail at some future time.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, NOVEMBER 30, 1865.

CHOLERA—ACTION OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.—At the regular meeting of the Suffolk District Medical Society, held on Saturday evening last, the subject of cholera was introduced, and there was a free interchange of opinion upon the question of its contagiousness or non-contagiousness. The discussion closed with the adoption of the following resolution, offered by Dr. J. B. S. Jackson:—

Resolved, That, in the opinion of this Society, *cholera is not contagious*. That the safety of the community, however, depends in a great measure on the regularity of the habits and cleanliness of the dwellings of its inhabitants; and, as in former epidemics, the disease has prevailed in those localities which were the most crowded and filthy, the propriety of immediate attention to such localities should be strongly urged upon the City Government.

We do not understand that the above resolution touches the question of the expediency of quarantine exclusion of cholera cases from our city. It stands as the formal expression by the members of the Suffolk District Medical Society, of their agreement in opinion with the highest authorities of the medical profession on the question of contagion. We have been most emphatically assured by gentlemen who voted for this resolution, that they by no means intended thus to imply that they regarded quarantine regulations as useless. On the contrary, unless we are misinformed, the feeling of many, if not the majority of those present, was decidedly in favor of quarantine. In this we feel that they and the municipal authorities are supported by all that is known of the present epidemic. Originating in Mecca, where it occurred during the great annual festival of *Kurban Bäiram*, which is said to bring together annually as many as 700,000 pilgrims, it passed to Alexandria, where the first case occurred on the 11th of May, "in the north-western suburb, near the railway station. This suburb is one of the lowest in the place, and is inhabited by upwards of 20,000 of the lowest class of Arabs, Greeks and Maltese." "At this time the sanitary condition of the town was infamous; and the water supply, derived from the Nile canal, was said to be charged in its course with decomposing matter derived from the carcases of 700 animals lying in the canal."

With regard to the question of its primitive origin, our authority (*Medical Times and Gazette*) says:—"We have referred at some length to this origin of the present epidemic, because the narrative goes to show that the disease in question may, under extreme conditions, have what is called a spontaneous origin. It is not to be ima-

gined, however, that the malady sprung up in any one individual by some perverse act of the economy without external aid, or through some unknown atmospheric condition equally mysterious. Not at all; there was formed unquestionably, if not imported, a poison derived from the decomposing excreta of that multitude, which, imbibed by one or more, went on progressing until the epidemic was established."

From Alexandria it appears to have spread to Cairo, where "it was found that the disease made little way in the European portions of the town, and that the better class Europeans escaped almost altogether. The malady spread amongst the Arabs, who dwelt, we are told, in dwellings of the most loathsome character, which were shared equally by man and beast. At the same time, the food of these people was deficient in quantity and bad in quality; while, owing to the excessive heat and the low state of the river Nile, the water they had to drink was actually putrid. These terrible evils were greatly exaggerated by personal uncleanliness and by superstitious indifference to disease and even to death."

Its next appearance was at Ancona, a sea-port of the Papal States, in the Gulf of Venice. Thus its progress was, "from Alexandria across the Mediterranean Sea, and up the Gulf of Venice, letting alone Navarino, the Ionian Islands, and Corfu, on the east; and Malta, Syracuse, Reggio, and Cotrone, with many other towns on the west coast, to Ancona. Presuming that it started from Mecca; it travelled in a line nearly due north-west between the 20th and 40th deg. north lat. and the 15th to the 40th east long. The question is, Did it travel at all, or were these four spots—Mecca, Cairo, Alexandria, and Ancona—spontaneously affected at nearly the same time with the one disorder? We think the evidence points indubitably to propagation of the disease in the line named. Given an epidemic of the disease amongst the pilgrims of Mecca, the next places of all others most likely to suffer would be Cairo and Alexandria. The disease at Alexandria, the town in the Papal States most exposed would be Ancona, the intercommunication being most perfect. But the epidemic did not confine itself to one line of march. Within two or three days before it was decidedly fixed in Ancona it appeared also in Constantinople, forty-three fatal cases having occurred in that city on July 13. * * * * On this point, in so far as Constantinople is concerned, we are not left in doubt. The disease was brought from Egypt by a frigate loaded with stores, and charged with the infection. Dr. Dickson, of the English Embassy, reported on July 8 that the cholera had appeared outside the walls of the Naval Hospital, 'where it was introduced from Egypt by the *Moubir Sourour*.' Thence it passed into the Hospital, and on the 12th of the month thirty fatal cases in all had occurred. From the Hospital it spread into the city. * * . "By these degrees the epidemic became active at three great centres: *at Alexandria*, commanding the whole of the Mediterranean Sea, from Tripoli on the east to Barcelona on the west; *at Ancona*, commanding the Gulf of Venice; *at Constantinople*, commanding the Black Sea. From these centres it has spread again to the points commanded by two of them. It has touched Gibraltar and the little island of Candia from Alexandria; and now from Constantinople it is reported as

moving round the shores of the Black Sea, being at Varna on the western and at Trebizond on the south-eastern coast."

In England the disease made its appearance in the latter part of September, at Southampton, a town which is in direct communication with the Mediterranean by the mail steamers, and only four days from Gibraltar, where the disease was then prevailing.

We are still of opinion, therefore, that cholera cases arriving in our harbor should not be brought up to the city. Provision should be made for their proper care and treatment on one of the islands, those passengers who are well being, of course, separated from the sick, and comfortably provided for during such detention as may be thought necessary.

We regret to learn than in our recent article on this subject an ambiguity of language led some of our readers to misapprehend our meaning. In saying that "no vessel having cholera on board should be allowed to discharge its passengers until a reasonable time had elapsed for the disease to disappear among them," we referred to their final disembarkation at the destined port. This has been understood as advising their forced detention on shipboard, whether sick or well. This was not our meaning. Of course *all* the passengers should, if possible, be removed from the ship at once, the well in preference to the sick, if there is any question of accommodation for the whole. We had written originally "land" instead of "discharge," but substituted the latter word, hoping to avoid the misconstruction which we thought the use of the former might possibly lead to.

New Hampshire Medical Institution, Dartmouth College, Hanover, N. H.—The annual commencement of this institution took place on Wednesday afternoon, Nov. 1st. Three of the theses of the graduates were read by their writers, for which prizes had been offered and awarded; viz., two on the Pathology of Inflammation, "old and new," by Joseph B. Holland, A.M., and Nathaniel B. Colman, and one on Uterine Hæmorrhage, by O. W. Sherwin. An interesting and practical address was delivered by Dr. George B. Twitchell, of Keene, one of the delegates of the New Hampshire Medical Society, after which the degree of M.D. was conferred by President Smith upon the following gentlemen:—

Names and Residences.	Theses.
Grenville Mellen Baker, Standish, Me.	*Influence of the Sympathetic.*
Samuel Addison Bridgman, Savannah, Ga.	*Intermittent Fever.*
Mark Trafton Bussey, Newburgh, Me.	*Gonorrhœa.*
Samuel Powers Carbee, Bath,	*Inflammation.*
Nathaniel Bryant Colman, Vassalboro', Me.	*Pathology of Inflammation.*
William T. Cox, Moravia, N. Y.	*Pathology of Inflammation.*
George Edwin Darling, B.S., St. Stephens, N. B.	*Hospital Gangrene.*
Frederick Augustus Eldredge, Milford	*Variola.*
Thomas Goodwillie, A.B., Hanover	*Leucocythemia.*
Charles Reade Gould, Hillsboro' Centre	*Opium.*
Joseph Bassette Holland, A.M., New York City	*Pathology of Inflammation.*
Wilson Alex. Hurt, Kilmichael, Choctaw Co., Miss.	*Etiology.*
William McAfee, St. John, N. B.	*Relation.*
Hiram McNutt, Warrensburgh, N. Y.	
Henry Rust Parker, Wolfborough	*Relation of Mind and Body.*
John Leander Peppard, De Bert River, N. S.	*Puerperal Fever.*
Charles Henry Rice, Ashby, Mass.	*Hæmoptysis.*

Fernando Coello Sargeant, Danbury	*Inflammation.*
Orlando Wood Sherwin, Woodstock, Vt.	*Uterine Hæmorrhage.*
William Henry Smith, Denmark, Me.	*Typhoid Fever.*
James Gorham Sturgis, Standish, Me.	*Amputation of the Thigh.*
Frank Topliff, Freedom	*Retroversion of the Uterus.*
Osmon Baker Way, Claremont	*Inflammation.*
Eli Mellen Wight, U. S. Army	*Diagnosis.*

In the annual announcement of 1865, the following prizes were offered to the graduating class by the Professor of Surgery and Obstetrics, Dixi Crosby, M.D., viz. :—

I. For the best thesis on "The Pathology of Inflammation, old and new," a copy of the last edition of Gross's large work on Surgery.

II. For the best thesis on Uterine Hæmorrhage, its causes, pathology, symptoms and treatment, a copy of the last edition of the United States Dispensatory.

III. To the student who passes most creditably his final examination in all the departments, a copy of Bennett's Practice of Medicine will be presented.

The prizes were awarded by a committee appointed for the purpose as follows :—

For the best thesis on Pathology of "Inflammation, old and new," to Joseph Bassette Holland, A.M.

For the best thesis on Uterine Hæmorrhage, to Orlando Wood Sherwin.

For the best examination in all the departments, Osmon B. Way.

ALBERT SMITH, *Secretary.*

TREATMENT OF CHORYZA.—M. Luc, an Assistant Surgeon in the French army, recommends the inhalation of tincture of iodine in nasal catarrh. "I inhaled tincture of iodine," says he, "from a phial for one minute at a time, at intervals of about three minutes; the heat of my hand was sufficient to promote the evaporation of the iodine; the headache yielded first, sneezing became less frequent, the secretion less copious, and although the inhalation caused a burning sensation in the throat, I was cured at six o'clock, P.M., of a cold which from nine A.M. to three P.M. had been sufficiently violent to compel me to use four pocket handkerchiefs."—*Cincinnati Lancet and Observer*, from the *Dublin Med. Press.*

M. Luc claims to have had equally good results in several other cases.

A PRIZE ON THE VACCINO-SYPHILITIC QUESTION.—The Medico-Chirurgical Society of Bologna (Italy) offers, for 1867, a prize of £20 on the following question :—Determine, by facts, whether the vaccine virus may or may not transmit syphilis.—*Lancet.*

THE ST. LOUIS HOSPITAL OF PARIS.—This establishment has lately undergone extensive repairs and valuable improvements; nor were the former uncalled for, as the hospital was built in 1606, for the shelter of the plague stricken. It was placed under the guardianship of St. Louis, as that monarch had died of the same disease. The building was formerly outside the capital, but has long been included within its walls.—*Ibid.*

Medical Societies in Canada.—Our neighbors in Canada are active in establishing Medical Societies. Two have recently been formed—the "Medico-Chirurgical Society of Montreal," and the "Quebec Medical Society." Dr. George W. Campbell is President of the former, Dr. F. A. H. Lane of the latter.—*Medical and Surgical Reporter.*

Dr. R. J. Patterson, Superintendent of the Iowa Hospital for the Insane, has resigned, and Dr. Mark Ranney, Assistant Physician to the McLean Asylum, Somerville, Mass., has been elected to fill the vacancy. Dr. C. Dewey, Assistant Superintendent of the same Hospital, has also resigned, and Dr. H. M. Bassett, of Ohio, has been appointed in his place.—*Ibid.*

Deaths in the city of Providence during the month of October, 1865, 111. This number is 10 less than in the preceding month; 14 more than in October, 1864; and 30 more than the average for October during the last ten years. There has been more than usual sickness in the city during the month of October, the prevailing disease being typhoid fever, with considerable measles, and whooping cough in some sections. Typhoid fever has been generally of a mild type, the number of deaths being small for the number of cases.

Dr. E. E. Phelps, of Windsor, Vt., has been appointed to a professorship in the Medical Department of the University of that State.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, November 25th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	36	35	71
Ave. mortality of corresponding weeks for ten years, 1853—1863	38.4	38.0	76.4
Average corrected to increased population - - - - -	00	00	83.30
Death of persons above 90 - - - - - - - - -		0	0

Books and Pamphlets Received.—On Wakefulness. By Wm. A. Hammond, M.D. J. B. Lippincott & Co., Philadelphia.—The Principles of Surgery. By James Syme, F.R.S.E. J. B. Lippincott & Co., Philadelphia.—Chloroform, its Action and Aministration. By Arthur Ernest Sansom, M.B. London. Lindsay & Blakiston, Philadelphia.—Lectures on Epilepsy, Pain, Paralysis, and certain other Disorders of the Nervous System. By Charles Bland Radcliffe, M.D. Lindsay & Blakiston, Philadelphia.—The Practice of Medicine. By Thomas Hawkes Tanner, M.D., F.L.S. Lindsay & Blakiston, Philadelphia.—Condition and Doings of the Boston Society of Natural History, as exhibited by the Annual Reports of the Custodian, Treasurer, Librarian and Curators, May, 1865.

Married,—In this city, 21st inst., Edmund T. Eastman, M.D., to Miss Clara A. Eastman, both of this city.—In Salem, 22d inst., S. Foster Quimby, M.D., to Miss Caroline S. Richardson, both of Salem.—At Hyde Park, 22d inst., Nomus Paige, M.D., of Taunton, to Maria Josephine Hewins, of Hyde Park.

Deaths in Boston for the week ending Saturday noon, November 25th, 71. Males, 36—Females 35. Accident, 3—apoplexy, 4—congestion of the brain, 1—disease of the brain, 3—bronchitis, 2—cancer, 2—consumption, 10—croup, 1—debility, 1—diarrhœa, 1—diphtheria, 2—dropsy, 2—dropsy of the brain, 3—exhaustion, 1—typhoid fever, 3—homicide, 2—infantile disease, 1—inflammation, 1—disease of the kidneys, 1—congestion of the lungs, 3—disease of the lungs, 1—inflammation of the lungs, 7—marasmus, 3—old age, 3—paralysis, 2—phlegmonous inflammation, 1—premature birth, 1—teething, 1—unknown, 4—whooping cough, 1.

Under 5 years of age, 24—between 5 and 20 years, 6—between 20 and 40 years, 13—between 40 and 60 years, 17—above 60 years, 11. Born in the United States, 48—Ireland, 18—other places, 5.

THE

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EXTRACTION OF HARD CATARACT.

[Read before the Boston Society for Medical Improvement, and communicated for the Boston Medical and Surgical Journal.]

BY GUSTAVUS HAY, M.D.

THE operation of extraction of cataract, even in cases in which the amount of success expected is sufficient to decidedly indicate the operation, presents considerable variety both as to the facility with which it is effected and as to its results. In conjunction with cataract the eye may be variously diseased and so altered that the lens may not slip out in the usual manner, and apart from the contingencies of the healing period the improvement in vision may be less than it would have been had the cataract been the only disease. We must not, however, attribute to disease in the eye what may be due to defect in the operation. Slight variations in the movement of the instruments, such as may very easily occur, become of considerable importance, owing to the minuteness of the parts, and may influence the result more or less favorably.

In illustration of the above, I have selected the following cases.

CASE I.—Mrs. E., American, æt. 57, healthy, entered the Infirmary Oct. 2d, 1864. The right eye had begun to get dim three years previously; the cataract was apparently hard, and now nearly ripe. The left was noticed to be dim a year previously; its cataract also hard, but not quite ripe.

Oct. 5th.—The ordinary flap-extraction, downwards, was done on the right eye, without ether.

10th.—Patient sitting up.

18th.—Yesterday, complaint of slight pain. The pupil a little smaller than in the other eye. Atropine instilled.

31st.—Wound well healed. Pupil opposite the middle of the cornea, and nearly round in form. With convex 4, vision at twenty feet is $\frac{1}{2\frac{1}{2}}$.

Nov. 1st.—With convex $3\frac{1}{2}$, vision is $\frac{1}{2}$.

Here we have a case which, with the exception of the slight irri-

tation recorded Oct. 18th, proceeded without any disagreeable circumstances and resulted successfully; so that a month after the operation the patient could leave the Infirmary, well. But such a favorable state of things is not the rule, at least not without numerous exceptions.

Case II.—Mrs. T., American, æt. 73, entered the Infirmary Oct. 6th, 1865. Sight began to fail in the left eye four years ago, with pain, which had recurred at times ever since. The right began to fail a half year after the other. Patient now sees with each eye large objects. Each lens is somewhat opaque in parts throughout, and shows a well-defined, small nucleus. Tension of eyes not increased.

Oct. 9th.—Iridectomy was done upwards on the left eye.

23d.—Under ether, an upper section of moderate size was made at the boundary between cornea and sclerotic, in the expectation that the small nucleus would easily pass out; but, after opening the anterior capsule, the lens refused to start. The section, though slightly smaller than usual, was yet thought to be sufficiently large. Some other method than the usual one must, then, be adopted. Schuft's spoon, it was thought, would endanger, by its too great size, a rupture of the hyaloid. Critchett's vectis spoon was preferred; but owing to its flatness, it had previously occurred to me that it would bring along the lens better if modified by the addition of a small oval opening, into which the convexity of the posterior surface of the lens might settle a little. Such an opening, 2 lines long and $1\frac{1}{2}$ lines broad, had therefore been made in the middle of the bowl of the spoon, the long axis of the opening coinciding with that of the spoon. This fenestrated spoon was introduced behind the lens, and with it the greater portion of the lens brought out without losing any vitreous. It was noticeable that, notwithstanding the appearance of a well-defined, small nucleus before the operation, yet after extraction the nucleus adhered rather firmly to the cortical portion.

Nov. 1st.—Some pain last night, and redness to-day.

13th.—Pain and redness have been considerable, but now diminishing. Sight improving.

21st.—Pain nearly gone; only slight redness remaining; with convex $3\frac{1}{2}$, has vision $\frac{1}{10}$ at ten feet.

As causes for the lens not slipping out easily, Stellwag mentions a flap too small, or a section carried too flat through the cornea, a spasmodic contraction of the sphincter pupillæ and posterior synechiæ. He does not mention an unusual degree of adhesion between lens and capsule, which may have existsd in the case just reported. As to the requisite size of the section, he says:—"A section of half the circumference of the cornea is never necessary, even for large nuclear cataracts; it suffices to enter and come out somewhat under the horizontal diameter of the cornea, and to carry the knife so that

the outer edge of the flap may be all along about a quarter of a line distant from the limbus conjunctivalis. If the nucleus is small and the cortical softened, or even if the nucleus be somewhat larger, but of normal consistency, a flap is sufficient whose extent exceeds only a little a third of the circumference of the cornea." This last is not strange if we remember that the average diameter of the lens is four lines, and that of the cornea five lines; so that an arc of a third of the circumference of the cornea would have a chord slightly greater than the diameter of the lens. Some additional length is generally wanted on account of the thickness of the lens.

Case III.—Mrs. T., æt. 68, American, in feeble health, entered the Infirmary May 13th, 1864, with cataract of the left eye. Iridectomy was done upwards on the 14th. Patient left on the 6th of June, doing well.

Aug. 19th.—Came back. Since leaving has been ill some of the time, but better for the past six weeks. The right eye shows some lenticular opacity and small floating opacities in the vitreous.

22d.—More than three months after the iridectomy, extraction was done upwards (under ether). Nucleus small.

25th.—Some pain. Lids very slightly swollen. Some conjunctival injection. Pupil dilated by yesterday's atropine. Compressive bandage continued. Atropine instilled. Weather very warm. May sit up.

27th.—Five days after operation. Conjunctiva somewhat swelled. Pupil dilated; its aperture in part of a cloudy, creamy hue. Compressive bandage omitted.

29th.—About the same, except appearance of pus in anterior chamber. Pain at times severe.

Sept. 10th.—Nineteen days from the operation. Œdema of upper lid increasing. For several days pus has shown itself near the aperture in the iris made by the iridectomy. Pupil still dilated.

27th.—Inflammation diminished. Occasional pain. Cornea slightly opaque. Pupil nearly closed. Opaque substance blocking up the artificial pupil and the natural one. Tension of globe diminished.

Oct. 2d.—Movable reddish fluid in anterior chamber. Tension much less than normal.

4th.—Patient left.

25th.—Came back. Tension restored somewhat. Reddish fluid absorbed. Cornea clear, except above in neighborhood of section. Pupil occupied by a whitish membrane.

Nov. 28th.—Iridectomy downwards and inwards.

Dec. 15th.—With convex 3½, has vision $\frac{1}{10}$ at ten feet.

1865, Oct. 6th.—Vision about the same, though on trial not quite as good as Dec. 15th, 1864.

This case is interesting as showing how tedious may sometimes be the inflammatory process after extraction, and also that notwith-

standing very unpromising symptoms a useful amount of vision may sometimes be obtained. In consideration of the above case and of another similar one, in which the inflammatory mass occupying the pupil seemed continuous on the one hand with the edges of the artificial pupil, and on the other with the corneal section, the question occurred whether the inflammation might not be aggravated by the presence of this artificial pupil. Is it possible that this pupil, by allowing the inflamed lens-remnants to come in contact with the corneal section, thereby promotes the transference of the inflammation from one to the other, or that the edges of the artificial pupil take on inflammation more readily than the rest of the surface of the iris? However, if we consider the morbid process in the two cases referred to as consisting in great part of inflammation of the portion of the lens remaining behind after extraction, it must be remembered that by means of the artificial pupil the extraction of the soft part of the lens is much facilitated. Setting this advantage of the iridectomy against the possible disadvantage referred to, there would still be reasons for considering flap-extraction preceded at an interval of some weeks by iridectomy as in general the easiest and safest method for ordinary hard cataract, inasmuch as by this method, with comparatively slight danger of rupturing the hyaloid, the removal of the lens is facilitated, and for a given amount of pressure on the eye a somewhat smaller section would suffice, and also rapid union is promoted. If the patient were quite infirm or restless, we might substitute for the usual section a smaller one of about a third of the circumference of the cornea, and bring out the lens with the aid of the spoon, setting the advantage of the smaller section over against the danger from the use of the spoon.

CLINICAL LECTURES ON AMBLYOPIA AND AMAUROSIS, BY PROF. A. von GRAEFE.

[Continued from page 355.]

While the intra-ocular end of the normal optic nerve, let its whole effect be white or yellow, still offers a well-marked reddish tint, which only partially gives way to the more decided bluish-white reflex of the lamina cribrosa, as in the case perhaps of an existing physiological excavation; in many cases of amblyopia, particularly the more serious, the whole face of the papilla becomes of an intense white. The contrast of color with the adjacent choroid becomes naturally more marked, the edge of the latter appearing to have acquired an increased distinctness. This reflex occurs for a double reason—partly because the atrophy of the papilla lays bare more of the lamina cribrosa, which offers a stronger reflection; partly because—besides the disappearance of the nerve-fibres—a thickening of the connective-tissue elements takes place in the papillary

section of the nerve. These two causes may be concerned together or separately in the change of color. If the first alone acts, the color becomes a bluish-white, and an excavation caused by atrophy results; if the second acts, the consequence is an intense and pure whiteness of the papilla, the surface of which is smooth; if both are concerned, the papilla becomes slightly excavated, the lamina cribrosa only visible in detail in places, perhaps through a preëxisting physiological excavation, the remainder being concealed by a layer of white connective-tissue. The reason why sometimes one form and sometimes the other occurs, does not appear to lie in an essential difference in the process of atrophy, but rather, as Schweigger's researches tend to show, in a preëxisting variety in the form of the papilla and in the different physiological intra-ocular pressure, as also in the intermediate effects of a stimulated circulation (on the connective-tissue). The second criterion, the *opacity*, need hardly be referred to after what has been said. The delicate semi-transparency of the normal papilla is naturally wanting when the connective tissue of the lamina cribrosa, or the thickened tissue substituted at the extremity of the nerve, forms the visible boundary. We can no longer, as usual, see the trunks of the vessels dip in, and are involuntarily impressed with the dead look of the opaque substance of the papilla in comparison with its usual appearance of vitality. The third criterion, the *excavation*, has also been sufficiently dwelt upon. As has been said, its presence or absence depends on the more negative or positive condition of the inter-connective tissue in the atrophied extremity of the nerve. A few words, in conclusion, on the *lessened size of the vessels*. It is true that we sometimes find all the vessels, including the main trunks, diminished in calibre, but this is a rule that by no means invariably applies to the latter. We may have a case of complete amaurosis of long standing, in which the optic nerve exhibits every sign of (nervous) atrophy, and where the main vessels have retained their normal diameter. A wholly different state of things obtains when atrophy of the optic nerve is the ultimate result of intra-ocular processes, for example of choroido-retinitis; in such a case the very diminution in size of the main vessels is the most regular and often most striking symptom. The ground of this diversity may be found in the fact that in cases of amaurosis, so far as pathological investigations have yet reached, as also after the division of the optic nerve (Rosow), only the nerve-fibre and ganglion-cell layers atrophy, the rest of the retina maintaining itself; whereas, in cases of choroido-retinitis leading to disappearance of the optic entrance, the reverse is the case, the whole tissue of the retina becoming destroyed. The differences we notice in the calibre of the main vessels in cases of atrophic amaurosis may well (as in the case of the papilla) have their origin in the varying condition of the connective elements of the retina. The diminution in size, if

not the complete disappearance of the smaller vascular ramifications on the papilla is, on the other hand, a constant symptom. The normal red shade of the latter depends undoubtedly on the very large number of small vessels interwoven with it, and the absence of these vessels contributes very much to the whiteness found in cases of atrophy. It seems as though these fine branches ramifying on the papilla itself were almost exclusively destined to supply the intra-ocular extremity of the nerve and the fibres expanding in its vicinity, and it would be precisely these ramifications which would be most affected by the disappearance of the fibrous layer; while the largest portion of the bloodvessels of the retina would be preserved for the supply of its other layers. The pallor of the papilla caused by the diminished size of these ramifications has, of course, an appreciable effect on the change of color. If the semi-transparence be tolerably well preserved it may precede other symptoms and be indicative of the first period of the affection, during which an ordinary examination of the field of vision discovers no anomaly; and it needs the more delicate method of investigation to disclose a want of power in the periphery of the field consequent on impairment of the functions of the nerve-fibres.

For the sake of conciseness we will class all those symptoms visible on the papilla, and which may be present in every conceivable degree of the affection, under the head of *atrophic degeneration*, and endeavor to call attention to their practical bearings on the study of amaurosis. And, as has been the case with various ophthalmoscopic symptoms, the multitudinous inferences drawn from which have been greatly cut down by the results of clinical experience, so has it proved with regard to atrophic degeneration of the papilla. Its existence has been used to prove the presence of a process necessarily resulting in blindness, and to a certain extent has been employed as a material foundation for amaurosis. We enter a decided protest against this attempt at identification. It ignores the fact that it is absolutely impossible to tell by looking at an optic nerve whether the atrophic degeneration be progressive or stationary, while here in reality lies the pith of the whole matter. Such conclusions are only allowable when the results of the functional investigation and the manner of development of the disease are taken into consideration. A total absence of atrophic degeneration, consolatory though it be under certain circumstances, is not sufficient to exclude, among others, the very worst fears (Case VI.). On the other hand, the presence of an appreciable amount of atrophic degeneration certainly proves a derangement of nutrition, with which is linked a functional anomaly; but even when present in a marked degree, we are sometimes able to give a prognosis favorable as far as regards ultimate blindness (Cases III. and IV.).

For the sake of explanation, I must return to the impairments of function already spoken of. The coëxistence of atrophic degenera-

tion with a field of vision absolutely normal at its periphery, does not necessitate an unfavorable prognosis as far as regards blindness. The question, then, becomes one of defects of continuity in the field of vision—as, for example, of large central scotomas, a prolonged existence of which exercises a perceptible influence on the appearance of the optic nerve. One of our cases (III.) is an example of this. On the other hand, the presence of atrophic degeneration decidedly complicates the prognosis as regards recovery, and central scotomas thus accompanied are, as a rule, capable of but slight improvement. If the field of vision is relatively normal, the presence of atrophic degeneration weighs heavily in the balance; and this not only because it diminishes the hope of recovery that would otherwise exist, but also because the fear of progressive failure of vision is thus brought much nearer home. In amblyopia potatorum, for example, the appearance of the papilla furnishes an almost entirely reliable test as to the curability or incurability of the case; the same is true in those cases of amblyopia, with a relatively normal field of vision, dependent on chronic meningitis. In connection with a review of the course of the disease, which remains to be treated of, it entirely settles the matter. If the periphery of the field of vision is abnormal, we must make a circumstantial investigation. In hemiopia resulting from the paralysis of one tractus opticus, the presence of a large amount of atrophic degeneration may not alter the prognosis (Case IV.). It would be a grave mistake to deduce from this a necessary progressive change for the worse. Special weight, however, is to be attached to the condition of things in certain cases of concentric contraction of the field of vision, which admit of a tolerably favorable prognosis in the case of delicate children, or individuals of a pronounced nervous temperament, particularly women, provided the optic nerve has remained normal (Case VII.); otherwise, however, may justly give rise to apprehension. The absence of any particular symptoms in fresh cases of amblyopia or amaurosis, with contraction of the field of vision, should not, of course, lead us to indulge in any false feelings of security (Case VI.). Such symptoms need some time (occasionally, however, only a few weeks) for their development, and accordingly not infrequently follow slowly behind the functional failure. On the other hand, if the derangement have existed some time without any implication of the optic nerve, this fact, taken in connection with the other circumstances of the case, may afford us reasonable grounds for encouragement. In fact, a grave form of amaurosis, with an already considerable impairment of the field and acuteness of vision, can hardly have existed several months without having set its seal on the papilla. In a case of advanced impairment of vision of long duration, the papilla is found entirely intact (putting malingering out of the question) only in those rare and curable cases which

I denominate proper anæsthesia of the retina. The ascertainment of the condition of things in the second eye is of special importance in those ominous forms which in the strictest sense deserve the name of amaurosis or progressive atrophy. Here a degree of pallor of the papilla, perhaps even a sinking below its proper level, may sometimes be found in that very early stage, when it needs a strict investigation to discover a torpid condition of the retina at the periphery of the field of vision.

Other symptoms about the papilla have had importance attributed to them in cases of amblyopia. Especially was for a long time an infinite deal said of *hyperæmia of the papilla*, as indicative of the first congestive stage of the disease. It is certain that a want of a sufficiently comprehensive survey of the numerous physiological variations has caused much that was normal to be looked upon as morbid. I have no intention here of detailing the ophthalmoscopic symptoms of true hyperæmia of the papilla, and will only state that this may help to explain the reason of amblyopia (as, for example, in intercranial congestion), but will hardly of itself account for a considerable diminution of perception. This refers, of course, to anomalies in the fulness of the vessels without any structural change. Moreover, hyperæmia of the papilla occurs much more frequently as a consequence of undue exertion of the eyes, for example in derangements of the accommodation, than in amblyopia, and is entirely absent in the fatal forms of progressive atrophy.

It has also been thought that *anomalies in the limits of the papilla* might be found in many cases of amblyopia. A loss of transparency in the connective tissue of the superjacent retina, such as often (see above) happens on the papilla itself, would in fact cause a loss of distinctness in the margin of the choroid on account of the increased retinal reflex. It is a very important fact, however, as regards the diagnosis, that this loss of transparency in cases of amblyopia is confined to the papilla, and depends perhaps on a separate nutrition of its connective tissue with implication of those vessels passing over from the choroid (Leber). If atrophy of the nerve depend on an intra-ocular cause, on choroido-retinitis, or particularly on neuro-retinitis, the matter becomes a different one, and it is then the diminished transparency of the adjacent retina, surrounding the papilla with a narrow border or a broader ring (beside changes in the vessels) which enable us to watch this method of development for a long time after the original process has run its course.

Finally, a real *diminution* in the diameter of the papilla has been supposed to take place in cases of atrophy, but neither pathological anatomy nor clinical observation have ascertained anything of importance in this particular.

The third chief factor in aiding us to form an opinion in amblyopic affections is *the mode of development of the disease* and the accompanying symptoms. To enumerate the many points which are here of importance were impossible without going over the entire ground, and we will confine ourselves, at least on this occasion, to a few practical hints.

And, first, we observe cases where the trouble developes itself in the shape of sharply-defined hemiopic or concentric limitations of the field of vision; also of central scotoma and even of total blindness, in either case occurring suddenly or very quickly (i. e., in a few moments, hours or days). It was in pathology formerly the custom to connect any sudden occurrence with a hæmorrhagic effusion, and thus fared these cases. But only those affections where the hemiopia occurred on corresponding sides could be ascribed to

apoplexy in the anatomical sense of the word, and even this connection has its exceptions.*

Where we have to deal with a double central scotoma, with sudden blindness of one or both eyes, the hæmorrhagic hypothesis is seldom admissible. We could, indeed, hardly point out its locality without ignoring the information derived up to the present from pathological anatomy. If we have other symptoms, indeed, of a preëxisting or accompanying disease, such as a process at the base of the brain, or the products of encephalitis, we are able to give a somewhat definite opinion as regards the cause of the sudden derangement of vision. But this is by no means generally the case. I have so often seen all these forms occur in entire health, and accompanied by symptoms otherwise so vague, that I must frankly admit my ignorance in general as to their cause. Their connection with hæmatemesis, gastric derangements, or the acute exanthemata, when they thus occur, is still unexplained. An attempt has necessarily been made to take refuge in the favorite hypothesis of a vaso-motory influence and spasmodic contractions in the vessels thereon dependent; an hypothesis to which some accompanying circumstances in the condition of the retina and the general system seem occasionally to give a color. Even the fact of a symmetrical development in each retina, or in the cerebral source of each, might to a certain extent be plausibly explained by nervous influences similarly symmetrical. But when shall we succeed in fructifying this treacherous soil with the seed of sound fact? The significance and the course of these processes is as uncertain as was their theoretical contemplation. In two cases attacked with apparently identical symptoms, there may result complete recovery, or the affection may persist and atrophy of the optic nerve become developed. The prognosis of the disease must, therefore, depend on its progress. Sudden cases of blindness in each eye seem to me to result more favorably in children than in adults. I shall embrace a favorable opportunity of publishing some facts in this connection. An absolute failure of quantitative perception of light, occurring in a case of sudden blindness, and having lasted one or several weeks, need not necessarily be regarded as hopeless. If it lasts longer, and is accompanied by atrophic degeneration of the optic nerve, the chance of course diminishes. It is favorable in the cases of derangement of vision of sudden occurrence after mental excitement, in which are found remarkable variability in the field of vision, entire retention of the phosphenes, even in the blind portions of the retina, and where absolute darkness exercises a favorable influence—a form of anæsthesia which sometimes accompanies cutaneous insensibility to pain, and which especially invites a solution on a vaso-motory basis. As regards central scotoma of sudden forma-

* We may even see true hemiopia, i. e., want of sensibility of one tractus opticus, as an accompaniment of migraine, of course distinguishing it from that false hemiopia, the seeing halves of objects, which sometimes occurs with migraine.

tion, I can give neither a cause nor a prognosis. I have seen it both disappear and remain fixed; never, however, lead to blindness when once its functional characteristics had for some time maintained themselves.

In comparison with the ordinary *more gradual* development, these cases of sudden or rapid occurrence must be looked upon as exceptional. Those cases of amblyopia in which the periphery of the field of vision proves *normal* or *relatively normal*, and the perception throughout the continuity of the field satisfactory, ordinarily develop themselves during several or many months till they either reach a certain point, or, the cause of the disease continuing active, assume other forms. Thus in cases where the periphery of the field of vision is absolutely normal, if the acuteness of vision continues to diminish, a central scotoma—previously impossible to define—becomes gradually developed. Those cases, on the contrary, where the field of vision is relatively normal, may pass into the amaurotic form with atrophic degeneration of the papilla, the field of vision becoming contracted (see above). As a rule, and in contrast with genuine atrophy, the affection in these cases which seem more favorable at the outset, developes itself equally in each eye. As far as regards the chance of ultimate blindness, the fact of the disease having remained a long time at the same point is materially favorable. The more serious forms are, it is true, liable to interruptions, which however, if carefully watched, are seldom found to last more than a few months. The fact that for a long time no change has occurred need not dampen the hope of recovery, provided the optic nerve appears normal, and no contraction of or interruption in the field of vision has taken place. On the contrary, we generally find these forms may be cured by a proper attention to the predominant cause. The immoderate use of alcoholic liquors, frequent indulgence in strong cigars, pelvic obstructions, catamenial derangements, cold extremities, suppression of habitual hæmorrhagic discharges or of pathological and physiological secretions, venereal excesses, irregular sleep and immoderate use of the eyes sometimes exert a separate, sometimes a combined effect, and it is then difficult to assign each their part.* The more, then, taking a general survey of the case, it is possible to ascertain and attend to these causes, the more confidently may we pronounce our judgment. If, partly from the above-named causes, and partly from some of which we are ignorant, symptoms have become developed which render probable the existence of a chronic meningitis, such as violent attacks of recurrent headache, with sensibility of the head to the touch, a sense of confusion, &c., a more cautious prognosis should be given; for al-

* The fact which cannot be denied, that amblyopia affects men more frequently than women, the proportion with us being about 4 to 1, has seemed to justify the conclusion that smoking is one of the chief causes; many of the other conditions, however, are especially applicable to men, and, in my opinion, excessive smoking must be regarded, in the majority of cases, as simply among the active causes.

though we often succeed in curing such forms of amblyopia by the use of powerful derivative* agents, they sometimes, however, assume a less favorable type. The same applies to amblyopia, although the functional derangement be slight, occurring after severe attacks of sickness—for example, after typhus and erysipelas of the head.

Of particular importance is the process of development in cases of *contraction of the field of vision.* And here should be stated, with reference to hemiopic limitations, that—putting out of the question cases of apoplexy and encephalitis—they may sometimes be induced by idiopathic and even transitory affections of an optic nerve tract. These generally depend on syphilis, in isolated cases, however, certain inexplicable nervous influences come into play, and neither the subsequent course of, nor recovery from the disease brings them to light. My experience teaches the development of such favorable cases to be so relatively rapid that the acme may be reached in a few weeks. Similar, but very rare cases of temporal hemiopia, of relatively quick development, are observed, in which—to judge from the entire subsidence of the symptoms—a transitory affection of the fasciculi cruciati must have been the cause. I by no means intend to assert that it is always possible to distinguish soon after its commencement, between this and the more serious affections; but among the more important criteria for determining this as soon as possible, appear to me to be the rapid, as well as nearly simultaneous and symmetrical development in both eyes; the relatively acute central vision, which seldom falls below $\frac{1}{4}$ or $\frac{1}{6}$, and the the entire integrity of the papilla after a lapse of several weeks. When within a relatively short time one eye becomes entirely blind, while the other for months afterwards remains intact, the prognosis with regard to the latter is much more favorable than if the disease had progressed insidiously and the first eye perhaps become only partially blind. We have in the first instance to refer the atrophy to one optic nerve proceeding from the chiasma, inasmuch as it would be highly improbable that an affection of the fasciculus lateralis or fasciculus cruciatus alone, and not of the contiguous fibres, should be in question.

If considerable derangements of vision, with contractions of the field of vision of one kind or another, follow on acute and severe cerebral symptoms bearing the type of encephalo-meningitis, we have no right to deduce progressive atrophy from either the unfavorable functional derangements nor from the atrophic degeneration of the papilla. We see, indeed, not infrequently, and in spite of all this, that gradual improvement up to a certain permanent point takes place. I was consulted a week ago by a person 24 years of age, who, at the age of 12, had suffered from a severe affection of the brain, as a direct consequence of which, the left eye had become en-

* Particularly the seton, which is here especially indicated, not, however, in genuine atrophy. Further, we may use aperients and a course of sublimate.

tirely blind, and the right limited to a small, central field of vision, enabling him with much difficulty to find his way about, and to distinguish the larger letters. The optic papilla of this eye had undergone important changes; the functional state, however, during the last twelve years, had remained the same. We must make it, as a general rule, the object of a careful examination to decide whether the cause of the derangement of vision has passed away or is still active. In the first case we often have to do with a result dependent on destruction of a portion of the conductive elements, and there is hardly a form of amblyopia amaurotica which may not to a certain extent be thus regarded. The same considerations apply to the question of recovery. Complete blindness may supervene on acute cerebral disease, quantitative perception of light may be entirely lost for several weeks, or in exceptional cases, even months, and yet vision be partially restored. My only intention in stating this is to warn against forming a fatal prognosis too quickly. On the other hand, illusory hopes must not be indulged in; if absolute blindness have lasted a considerable time and the papilla become degenerated, the prospect is extremely bad, and at the best becomes confined to the reinstalment of small portions of the field of vision. A marked distinction, however, still exists between processes of this class and those which progress insidiously and without marked cerebral symptoms, inasmuch as these, in no stage of their development, admit of amelioration, and are at the utmost capable of being but temporarily arrested.

[To be continued.]

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

Nov. 13th.—Dr. Hodges reported the following cases, and exhibited plaster casts illustrating their results.

I.—*Extensive Removal of Tarsal Bones.*—A man, 33 years old, seven weeks previous to his admission to the Massachusetts General Hospital, wounded the dorsum of his left foot deeply with an axe. Abscesses, extensive suppurative inflammation of the soft parts, and disease of the tarsal bones followed. His general health depreciated in consequence. July 22d, under ether, it was found that the finger could be passed through the tarsus to the sole of the foot. By a transverse incision across the instep, the proximal heads of all the metatarsal bones, the three cuneiform bones and the cuboid, all of which were diseased, were removed. A large incision was made longitudinally through the thickness of the sole, to permit the escape of pus. In making the dorsal incision, the extensor tendons were disregarded, as their usefulness had already been destroyed by the primary injury and the subsequent inflammation.

Aug. 17th, the patient sat up.

Aug. 27th, he began to walk by the aid of crutches.

Sept. 1st, the wound was entirely healed.

Sept. 11th.—Having been about the hospital grounds for ten days, the cicatrix being perfectly sound and firm, and his health entirely re-established, the patient was discharged. The foot was somewhat shortened, though otherwise but little deformed. Its plantar aspect was convex instead of concave, the bulging being due to the flexion caused by approximating the surfaces of the gap made in the skeleton of the foot. The pressure of further use promised to remedy this. For walking, the stump was preferable to any which could have been left by an amputation of a portion of the foot, the only alternative of the operation performed.

II.—*Excision of all the Tarsal Bones and of the Ends of the Tibia and Fibula.*—A little boy, 5½ years old, was "run over" by an empty railroad ice-car. The principal injury received was by his feet. In the right foot the integument was almost universally separated from the subjacent tissues by effused blood, it was lacerated over each ankle, and the soft parts generally were greatly bruised and disintegrated. No fracture was discernible, nor was there any distortion that suggested dislocation of any of the tarsal bones. The left foot was similarly injured, but to a less extent. The question of immediate amputation was raised on his admission to the Massachusetts General Hospital, July 14th, three hours after the accident, but the attempt to save the foot seemed justifiable. On the 15th, numerous incisions and punctures through the skin were made to relieve the tension, which was great. Much improvement followed this. On the 18th, scarlet fever made its appearance. It ran a mild course, but was succeeded by a desquamation of unusual thickness and severity, which left the skin exceedingly tender and sensitive, and prolonged convalescence. During this time all active inflammation in the feet subsided, and the left one quite got well. Over each malleolus of the right there was a broad ulceration, at the bottom of which dead bone could be felt. It was not until Sept. 6th that the boy's general health permitted examination under ether, and the performance of any operation. It was then found that the necrosis of the tarsal bones was general, and that the extremities of the tibia and fibula were also involved. By a curved incision from the external malleolus along the outer border of the foot, and across the front part of the dorsum of the foot, all the tarsal bones and about one inch of the tibia and fibula were removed. An effort was made to leave behind all the periosteum possible. The recovery was rapid, and on the 6th of October the wound was healed, the foot had regained its shape, and differed only from its fellow in length and the want of prominence at the heel. The patient was able to raise and hold it out himself, and wore only a small and light tin splint, with a foot-piece for support.

Oct. 13th, he began to use the foot in walking, which, though the shortening of the whole limb was considerable, furnished a remarkably firm and hard-padded stump, promising advantages over an artificial substitute. The general health, strength and flesh were entirely restored.

III.—*Circumscribed Traumatic Aneurism of the Right Brachial Artery; Incision of the Sac; Ligature of both Ends of the Artery.*—The

injury occurred whilst shovelling coal, a large lump falling from his shovel while the patient was in the act of lifting it. Severe pain at the elbow instantly followed, obliging him to quit work, and not permitting sleep, except when under the influence of opium. Ten days after the accident, the arm began to swell and to be discolored. When this condition subsided, at the end of three weeks, a tumor was discovered just below the elbow, as large as a small egg. The maximum of the tumor was at first towards the internal condyle; afterwards it rapidly developed across the arm towards the outer condyle. At the time of the patient's entrance to the Massachusetts General Hospital, Oct. 25th, seven weeks after the accident, it was of the bigness of a man's fist, its transverse diameter being double that of the longitudinal, and lying wholly below the bend of the elbow. It was elastic, neither fluctuating, sensitive nor movable. It pulsated feebly on its inner side, not elsewhere, and there was no pulsation either in the radial or ulnar artery at the wrist. It gave an aneurismal murmur when listened to with the stethoscope. It was not compressible, diminished in size by pressure, nor modified by compression of the artery above, except as to pulsation. The hand was sub-livid, cold and numb. The tumor was slowly enlarging. Oct. 28th, the brachial artery being compressed, an incision was made, the muscles were separated, and the tumor exposed. It consisted wholly of recent coagula, contained within a distinct, circumscribed sac. These were turned out, and the artery, which lay superficially upon the tumor, was tied above and below an oval opening which involved about one half the calibre of the vessel, as though a transverse rupture had occurred, the edges of which had subsequently separated. A small fibrinous clot protruded from each end of the artery at its point of rupture. The collateral circulation being in part established, there was a little bleeding from the surface of the false sac of the aneurism; otherwise no blood was lost. The ligatures came away Nov. 3d, at which time the wound was granulating finely. No pulsation had reappeared in the arteries at the wrist.

The subject of this operation was born in Connecticut, was 41 years old, of a large, tall frame, and always healthy. He had been three years in the army.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, DECEMBER 7, 1865.

THE CHOLERA—CONTAGION AND QUARANTINE.—We published in our last number a resolution passed at a recent meeting of our local medical society, in which the profession of this city is represented as expressing a unanimous opinion "that cholera is not contagious." We felt at the time that the action of the Society was not as deliberate as the important nature of the question under consideration deserved, and that more time should have been given to discussion before the decisive opinions of members were called for, particularly as the term contagion is used with so wide a latitude of meaning. That cholera

is not contagious like smallpox, undoubtedly all present were prepared to admit, but that it cannot be communicated in any way by intercourse with or approximation to those already affected, was certainly not the interpretation intended by many who voted for the adoption of the resolution. Inasmuch, however, as the vote also covered a recommendation to the municipal authorities concerning the sanitary condition of the city, it was passed, although, as it stands, it neither represents the opinion of the profession as a whole, nor even of all those who were present at the meeting, on the subject of contagion. Such a question should be discussed at a special meeting, and certainly deserves more than an hour's consideration.

Within a few days the daily newspapers have published the remarks made at that meeting by one of the oldest and most eminent physicians of this city, in which he advocated the following points of belief:—

"I. I do not believe that cholera has hitherto shown itself to be a contagious disease.

"II. I do not believe in the efficacy of quarantine or any species of non-intercourse, to avert the disease.

"III. From our past observations, I do not believe that cholera, should it re-appear in this country, will be so likely to trouble New England as it is to visit the malarious regions of the South and West.

"IV. I believe that the best prophylactics against this disease are strict temperance, wholesome food and clothing, uncrowded residences and lodgings, and avoidance of excesses of all kinds.

"V. I believe that cleanliness, good drainage, and an abatement of nuisances are essential to the comfort and health of all cities. Their specific influence upon cholera may be assumed to be as great as that upon influenza, scarlet fever, smallpox and various other epidemics, but not greater."

With due respect for the opinions of one who has had, perhaps, a more extended opportunity of studying this disease than any other member of the Society, we feel it our duty to state that the views expressed in the last paragraph are held by himself alone, so far as we know, and that we certainly consider it injudicious that they should have been published in such a manner and at a time when the whole profession has been urging upon the public authorities, already too remiss, the special and immediate necessity of sanitary reform in view of the approach of cholera.

The same public journals contain, also, the following announcement of the opinions of the Consulting Physicians of the city, who "unequivocally declare their conviction that the disease is neither contagious nor infectious; that it cannot be propagated by being near the sick, nor by handling the secretions or excretions from the bodies of the sick or of the dead. The disease is epidemic, and cannot be restrained or controlled in its progress by quarantines or cordons of any kind. * * * Being thus of the opinion that neither quarantine by sea nor sanitary cordons by land have ever been found, or can be found, effectual in protecting cities or countries from the visitation of cholera, the physicians therefore recommend that no such restrictions be made, but in order to produce tranquillity in the public mind, and from respect to the opinions of those who think differently, they believe it

might be well that vessels arriving from places where the disease exists should be made subject to the visitation of the Port Physician, but that none of the passengers or men should be in any way restrained from freely communicating with their friends on shore, or with the city, or from landing at any time with their personal baggage and effects, and no vessel should be detained in quarantine longer than is absolutely necessary to put her in a cleanly condition."

To the far more important question of the disposal of a vessel and passengers arriving with the disease on board, they make no allusion. If their views concerning its non-propagation above stated are correct, both the ship and its contents should be allowed to come at once to our wharves; if, on the other hand, such a vessel may be regarded as a floating and detached portion or district of the infected city she has recently left, and there be grounds for believing that the disease may be borne in this way from country to country, or that it may in some manner be communicated by individuals or their surroundings to others, without reference to the possibility of its spontaneous origin or of its arrival in some other way or at some other time, we maintain that it is the duty of the authorities to hold such a ship at arm's length from our city, to discharge at a distance her passengers and to cleanse her as speedily as possible, to separate the sick from the well, and to prepare insulated hospital accommodations for the former. As to the further disposal of the non-affected, we do not feel competent to offer an opinion. In view, however, of certain facts connected with the present epidemic in European ports, the question seems to us one of grave importance, and worthy of mature consideration. This course we shall hold to be the only proper one, until it has been demonstrated beyond all question that such precautionary measures are of no avail, and as long as the opinions of the eminent scientific men, in countries where ample opportunity is afforded of studying the natural history of the disease, concerning contagion and quarantine, directly support it. So long as any rational doubt exists, it would be culpable to act otherwise.

The foreign medical journals just received contain much interesting matter bearing upon these questions, from which we quote without comment, that it may be seen how widely the opinions of medical men in other countries, concerning the present epidemic at least, differ from those held by the gentlemen above mentioned.

Dr. Guerin, in the *Gazette Médicale de Paris*, says:—"Having described the amount of the evil, let us recall the methods of stopping and preventing the disease. The authorities have taken wise measures; the troops are marched out, and the barracks are aired and cleaned. This is good: but it is not enough. It ought to be made universally known that diarrhœa is the prelude to cholera, and that by treating it the development of cholera is prevented; daily inspections should be ordered, if this has not been already done; finally, the regiments should be scattered as much as possible, and the proportion of numbers to localities diminished. The same is true as to all masses of individuals, workshops, even hospitals. Then we consider it an evil to assemble a large number of cases in one locality, such as a special ward. The hospital authorities have no doubt done well in not admitting cholera patients into wards containing others, but it is very desirable that provisional hospitals should be established round Paris,

so as to spread the cases as much as possible. It has always been noticed that the mortality has been greater in the neighborhood of large hospitals. The neighboring population would therefore gain by not having around it great centres of infection. This is why we have always protested against the system of large hospitals, against central hospitals, if not against the hospitals themselves."

In an article by Prince J. Zagiell, physician in Cairo, published in the *Gazette des Hopitaux*, it is stated with reference to the question of contagion, "The morbific principles are not of the nature of a virus, but depend upon molecular miasmata diffused through the atmosphere, which poison by contact with the mucous membrane of the respiratory passages, and with the cutaneous system. Cholera is transmitted from individual to individual independently, up to a certain point of atmospheric conditions. The places where the pathogenetic principles are disengaged, are the centres which act only on the individuals within their sphere of activity, and in whom there already exists a special predisposition, accompanied by normal influences which favor the action of contagious miasm. Then, individuals once attacked by this disease, become themselves centres of infection, pouring into the atmosphere the animalcules capable of transmitting the epidemic to other individuals equally predisposed. Therefore, it is not by the contact of individuals that cholera poisons, but by altering the surrounding air which is breathed by the individuals inhabiting infected localities."

The French government, as our readers may know, has proposed an international congress to study the disease and "to propose practical measures for confining and suppressing the cholera upon its first appearance," and the London *Lancet*, in discussing the proposition, strongly urges the efficacy and economy of quarantine, and speaking of the visit of the Emperor to the Paris cholera hospitals, it says further:—"It may be permitted us, however, to doubt whether the urgency of the case is such as to call for this invitation to contagion, or whether the good done under existing circumstances is equal to the gravity of the risk incurred. Many a time when a general has felt an impulse to head the dashing charge, he has been arrested by the friendly voice which reminded him that his own life weighed too heavily in the scale to be risked on the chance of meeting a stray bullet; and too little is known of the means by which cholera is diffused to allow us to say that the Emperor did not incur voluntarily a considerable danger in breathing the atmosphere of those wards. * * For we repeat that the good done by the visit of the Emperor cannot, in our opinion, under present circumstances, weigh for a moment against the danger to the country from his voluntarily entering a focus of cholera poison."

The Constantinople correspondent of the *Medical Times and Gazette* writes as follows:—"If any one should still have entertained any doubts about the contagious nature of cholera, these must have been finally dispelled by the circumstances attending the last epidemic here, which I shortly described in a previous letter, and which were almost identical with those observed during the visitation of the same disease at the time of the Crimean war. Then the French troops who came from Algeria, where the disease devastated the country, had scarcely been disembarked at Gallipolis when the cholera broke out

amongst the people there. From this place the disease followed the French to Varna, where it decimated the inhabitants, sparing, however, the intermediate centres of population, and more especially Constantinople, with which the French had not had any communication. At a later period a camp was formed on the heights of Maslac, the *échelon* of which was Yeni-keny, in the Bosphorus. This had scarcely been done when cholera appeared at Yeni-keny, but in no other quarter of the metropolis; it was only after some time that the disease invaded Pera, the nearest suburb to Maslac, with which the troops lodged in the camp had had frequent communication. Such observations as these are almost as convincing as physical experiments; they show the connection between cause and effect as clearly as it can be shown in pure science. That ill-fated ship which brought us cholera this season from Alexandria has added another striking proof for the assertion that cholera is indeed an eminently contagious disease. Not that the simple contact of a choleraic patient would suffice to produce cholera in another; but it is contagious in the way in which yellow fever is so. Both yellow fever and cholera have a great predilection for ships which are stationed in the ports where an epidemic is raging; both diseases have sometimes a long incubation; they often only break out after the vessel has left the infected place, and, the disorder having once been established on board, it clings to the unfortunate ship with the utmost tenacity. In cholera it is chiefly the alvine evacuations which propagate the disease. In this way linen which has been used by choleraic patients, houses which have been inhabited by them, ships where contamination has once taken place, may retain the contagion for a long time, and become the cause of fresh infections. Moreover, we find that the evacuations of persons suffering from the milder forms of the disease, of "cholerine" and choleraic diarrhœa, yet contain the contagion, just as well as the excretions of those who have died of real cholera; and it may therefore be readily conceived that ships, houses, &c., may be contaminated without a single attack of real cholera having as yet taken place within their precincts." * *

"It is well known that the period of incubation in cholera is much longer than five days, since the researches of Pettenkofer and Faye have shown that incubation generally lasts a week or two, and sometimes as long as three or four weeks; and how can quarantine be expected to prove useful if the minimum duration of the period of incubation is taken as a standard? Another requirement appears to be that those who give false declarations of health should be severely punished. In the case of the *Mukbiri-Surur*, which, as you know, brought the disease to us, the captain declared that there had been no death nor any case of disease amongst the crew during the passage, and upon this declaration the vessel was at once freely admitted; yet on the evening of the same day twelve patients were brought from the same ship to the Marine Hospital, and the physicians at once perceived that there were eleven cases of "cholerine" and one of algid cholera. The latter ended fatally the same night."

The account of the local epidemic at Epping, in the same journal, illustrates in a striking manner the importance of good drainage. Eleven persons were attacked, and eight died, from drinking water from an infected well, among whom were the physician and nurse of those originally attacked.

The same journal gives the following account of Snow's theory of the cause of cholera :—

"Snow only looked upon water as the great means by which the cholera poison was distributed. He said, and he proved, that if choleraic excreta be supplied to a community by and through the water which that community drinks, such process will prove the most determinate means of introducing cholera into the community, and that by such process great and sudden outbreaks of cholera will be secured. Acting on this thought, he actually advanced directly to the cause of the cholera during the terrible Broad-street epidemic in London, and, removing the handle of the pump by which choleraic poison was being dispensed to many hundreds of the population, he stopped the plague as if by magic. But while he held to this view of water as a means of propagating the poison, he enforced the opinion that there were other modes of transit. He put these modes into four groups. First, he held that the moist cholera excreta on the clothes and bedding of infected persons might be carried mechanically by the *vapor* of water, and might enter the nostrils and mouth in that form, and so be swallowed with the buccal secretion. It was in this way, he believed, that laundresses engaged in washing the clothes of infected persons were so readily attacked. Secondly, he maintained that the poison might dry on infected clothing, and that from such clothing, on its being unfolded or moved, the solid organic matter might escape in small substance, might be wafted a few feet in the air, and might, in fact, be absorbed through the mouth by any one exposed to it. Thirdly, in respect of nurses, persons who lay out the dead, and others in attendance, he urged that these might actually carry the poison on their hands and infect themselves by taking their food while their skin was not properly clean. In mines and dark places where many persons congregate, this, he thought, was a very common means of communication. Lastly, he concluded that the very utensils—such as basins and cups used by the sick—might convey the choleraic matter, or even the cloths on which such utensils, imperfectly washed, have been dried."

And further on it says :—

"In so far as practice is concerned, the whole experience of the present epidemic has been to show that the choleraic poison, once developed, travels only in the manner suggested by Dr. Snow, and that all rational measures for the suppression of cholera rest on a correct appreciation of his theory. Thus, at Constantinople, infected articles of clothing were washed in water which afterwards escaped to a drinking fountain; thus, in Paris, the disease is spreading by the aggregation of diseased with healthy persons; thus now, as in all former epidemics, it runs that those who attend most closely to the sick and wash the infected clothing die most speedily; thus it is that when the poison is introduced into or developed in towns where it cannot contaminate great supplies of water, the disease is localized and limited."

Accounts from Paris to the *Medical Times and Gazette* state that :—

"The hospital physicians seem to be modifying their ideas concerning contagion, as all the cholera patients are treated in separate wards. The Administration has also ordered the immediate removal, cleaning and disinfecting of the bedding used by cholera patients, as well as the washing and fumigation of the personal clothing. * * * During the last week the cholera has been on the increase in Paris, and has exceeded the formidable number of 300 deaths per diem, reckoning private and hospital patients. While at some hospitals a diminution in the number of admissions has been observed, in others these have increased, so that the St. Antoine and La Charité now receive more than the Hotel Dieu; but it is in private practice that the increase is chiefly observed, while many of the patients who were already in the various hospitals for other complaints prior to the outbreak have fallen victims to it. The Hospital Beaujou, in the Quartier St. Honoré, is filled with patients, and the mortality is enormous, and the diserse spreads in the hospitals."

It has been stated as evidence of the non-contagiousness of the affection, that physicians and hospital attendants never take the disease. We have been told by one of the physicians at the cholera hospital during the last epidemic in this city, that several of those in attendance were somewhat affected by choleraic symptoms, and the large number of deaths among medical men in Europe during the present epidemic certainly points in an opposite direction. The *Lancet* of Oct. 28th says :—

"M. Cacciaguerra, a medical student attached to the St. Antoine Hospital, of Paris, caught the disease while attending cholera patients, and died very rapidly. Several other students are lying ill, stricken by the epidemic. We learn that M. Mocquot, one of these excellent young men, has just died. The following medical practitioners have recently died at Ancona, whilst attending cholera patients. We find the list in the *Imparziale*, of Florence, and hope, with the Editor, that the Italian government will not forget the widows and orphans. In fact, nothing less than great liberality towards the relicts and the children can be accepted by the medical body as a recognition of the heroism of these men. Drs. Jacobi, Persichelti, Stefanini, Bruscoli, Marchetti, Piccinini, Polloni, Corbisier, Pederzolli and Bonetti."

The death from cholera of Dr. Briard, an eminent Parisian practitioner, is also announced. In England even, as yet so lightly visited, Mr. Cooper, one of the health officers of Southampton, and Mr. McNab, the medical attendant upon the cases at Epping above mentioned, have succumbed to the disease.

We learn that there are 450 students attending the present course of lectures in the Medical Department of the University of Michigan. The Department of Medicine and Surgery was opened in 1850, and it now numbers the largest class that has ever been assembled west of the mountains. It employs ten professors and instructors, and has a six months' course of instruction.

From the last annual report of the Physician and Superintendent of the Vermont Asylum for the Insane, we learn that there were in the institution, Aug. 1, 1864, 458 patients. There were admitted 144; discharged, 122; remained Aug. 1, 1865, 480.

Dr. George W. Marsters, of Waltham, late Assistant Surgeon in the U. S. Navy, has been appointed Assistant Surgeon to the State Almshouse at Tewksbury.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, DECEMBER 2d, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	48	34	82
Ave. mortality of corresponding weeks for ten years, 1853—1863	39.4	40.5	79.9
Average corrected to increased population - - - - -	00	00	87.06
Death of persons above 90 - - - - - - - - -		0	0

NOTICE.—Bills of subscribers who are indebted for the current year will be enclosed in the present number of the JOURNAL, or in one or two of the succeeding numbers. As no collector has been employed during the present year, subscribers are requested to remit their subscriptions, either in the usual way by mail, by private conveyance, or by money orders through their respective postmasters. Some accounts of longer standing have already been forwarded, and the attention of those interested is particularly called to these accounts.

COMMUNICATIONS RECEIVED.—Clinical Cases in the City Hospital, Albany.—Letter from the Assistant Surgeon U. S. Steamer Suwanee, off the coast of Washington Territory.

PAMPHLETS RECEIVED.—Twenty-ninth Annual Report of the Officers of the Vermont Asylum for the Insane.

MARRIED,—In this city, Nov. 30th, Alexander Thomas, M.D., to Miss Margaret Williams.—In Portland, Me., Nov. 25th, N. A. Hersom, M.D., late Surgeon 17th Me. Vols., of Farmington, N. H., to Miss Jennie S. Lord, of Springvale, Me.—In New York, Nov. 28th, Dr. Frank O. Earl, formerly of Chelsea, Mass., to Miss Sarah Carpenter, of New York.

DEATHS IN BOSTON for the week ending Saturday noon, December 2d, 82. Males, 48—Females 34. Accident, 1—apoplexy, 2—inflammation of the bladder, 1—congestion of the brain, 1—disease of the brain, 2—inflammation of the brain, 1—carbuncle, 1—cancer, 1—consumption, 19—convulsions, 4—debility, 1—diarrhœa, 2—dropsy of the brain, 2—bilious fever, 1—scarlet fever, 1—typhoid fever, 3—typhus fever, 1—disease of the heart, 3—hernia, 1—infantile disease, 6—disease of the kidneys, 1—disease of the liver, 3—congestion of the lungs, 1—disease of the lungs, 1—inflammation of the lungs, 8—marasmus, 2—premature birth, 1—smallpox, 1—spina bifida, 1—synovitis, 1—unknown, 8.

Under 5 years of age, 32—between 5 and 20 years, 3—between 20 and 40 years, 23—between 40 and 60 years, 12—above 60 years, 12. Born in the United States, 54—Ireland, 19—other places, 9.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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DERMOID TUMOR OF THE CONJUNCTIVA.

[Read before the Boston Society for Medical Observation, and communicated for the Boston Medical and Surgical Journal.]

BY F. P. SPRAGUE, M.D.

S. G., a girl eight years of age, was brought by her mother to the Massachusetts Charitable Eye and Ear Infirmary, on account of what she called a wart on the ball of the left eye. Examination showed a small, elevated growth, situated on inner edge of cornea, in its horizontal median, implicating both that structure and the sclerotic; about two thirds of it resting on the sclerotic, the remaining third obscuring the cornea. It was of oval shape, about four lines in length, a little less in width, and about two lines in height, its greatest length corresponding with the horizontal diameter of cornea. It presented a smooth, rounded, projecting surface, of white, glistening appearance, being covered with conjunctiva, in the same way as the rest of the sclerotic. There were no vessels leading to it, or any evidences of inflammatory origin.

Its most peculiar characteristic, and the one which caused application for relief, was the presence of hairs, springing from its surface, resembling, in size and tendency to curvature, ordinary eye lashes. They were directed transversely across the cornea, to the surface of which they were so smoothly applied that they seemed to produce but little irritation. The eye was, however, slightly injected and lachrymose. The mother had been accustomed to remove these lashes with her fingers, which she was enabled to do by working the lids, so as to get the hairs to project between them. On being questioned as to history of growth, she stated it was congenital, that she thought it had increased slowly in size, and that the hairs had not been noticed till three or four years previously.

The hairs were removed by forceps, and excision recommended, which was consented to and performed a few days later. The only difficulty experienced in the removal was in obtaining a hold of the tumor, which presented a surface as dense and slippery as polished bone, defying the ordinary toothed forceps, and compelling recourse

to a small, sharp hook. It was easily dissected off, when a hold had once been obtained, leaving in place of the elevation a corresponding cavity of both cornea and sclerotic.

A few hours later, the growth was given to Dr. Calvin Ellis for examination under the microscope. At that time it had shrunk into a dried and shrivelled mass, which seemed to consist almost entirely of condensed fibrous tissue, with very few nuclei.

The removal caused no irritation; it left, of course, an opacity of the cornea, corresponding to place of tumor.

Remarks.—I have been induced to report this case from the impression that these little tumors are quite rare. On looking over several authors I could find no mention of them till I took up "Wecker on Diseases of the Eye," a work now issuing from the French press. Wecker seems to have carefully collected all the observations on the subject, which, however, are few in number. He mentions only one case as seen by himself. He adopts the name of dermoid tumor for the growths in question, considering their structure as identical with that of the skin. This view is substantiated by microscopic examinations. It appears from the observations quoted that these "dermoids" may vary in size, from a split pea to a cherry (?), the color being white or grayish yellow; that they may or may not present hairs, but are generally found without; that they constantly occupy the edge of the cornea, resting partly upon it and partly upon the sclerotic, the conjunctiva covering a part of the tumor, and losing itself insensibly over the corneal portion. It is oftenest found upon the external and inferior corneal border.

Prof. Rybas, one of the authorities quoted, maintains that the "dermoids" must not be confounded in structure with warts on the skin, the latter consisting essentially of a localized hypertrophy and elongation of the papillæ, the whole covered with a thick and elevated conch of epithelium. Lately many microscopic researches have been made. They have shown a more or less complete identity of the "dermoids" with the skin, but the presence of hairs is not always demonstrated. It is an interesting fact, and one that has given rise to a curious theory as to the production of these tumors, that they are often accompanied by a coloboma of one of the eyelids. The theory alluded to is by Prof. Rybas already mentioned, one of the authorities who seems to have bestowed the most pains and research on this matter, and I will quote it in his own words, which are as follows:—

"It is well known that the conjunctiva, in the early stages of fœtal development, has a structure completely identical with that of the integument in general, and that before the development of the eyelids it is smooth and stretched upon the eyes. This part of the skin becomes gradually thinner, and after the tenth week it forms at the superior and inferior periphery smooth elevations (rudiments of eyelids), which towards the end of the third month, or at the

commencement of the fourth, come in contact, adhere and unite. It follows that the horizontal median of the eye, where hitherto the dermoid of the conjunctiva has been exclusively observed, is left a longer time uncovered by the eyelids. All parts of the cutaneous system, which, till the perfect development of the fœtus, rest exposed at the surface of the body, acquire gradually the structure known as the well developed cutaneous integument, while, on the contrary, the portions of the skin folded inwards, are transformed into mucous membrane.

Suppose now that the eyelids, which should touch each other at the median line, do not completely close, so that after the fourth month there still remains a part of the conjunctiva uncovered, it will result that this part will assume the properties of the external integument, and that the opening, left by the imperfect closure of the lids, will be filled, as if by a third eyelid, isolated upon the globe. This is why I have already, in 1858, submitted to the attention of observers the question, if there be not a correspondence between the "dermoids" and congenital coloboma of the eyelids.

A relation of this kind seems to have been established in a case observed by M. Ammon, where the coloboma of the upper eyelid corresponded in its position and direction, to a conjunctival dermoid, planted at the superior part of the globe. A similar case, that is, where a congenital coloboma was combined with an alteration and thickening of the conjunctiva, is reported by Meyer, who says—"There was at the intermediary part (of the conjunctiva of an infant), a vascular mass, placed upon the globe of the eye; it was prolonged to the transparent cornea, and performed the office of a tendon, which approximated the two parts of the eyelid, when the child wished to close the eye."

Wecker remarks that this theory, though requiring a greater number of observations to substantiate it, seems the best adapted to make known the origin of congenital dermoid.

I will add, that in the patient under my charge, though I do not remember anything unusual about the lids, not having my attention particularly called to them, that there was a malformation of the mouth, consisting in its prolongation on the left side (the same side as the eye affected), and that the left ear presented a curious projection, springing from its anterior cartilage, apparently a fatty species of tumor.

An English Hospital in Paris.—The Messrs. Galignani, of Paris, have built and endowed an hospital for the English poor residing in the city. It is situated on the new Boulevard de Bineau, and contains twenty-five beds. It is placed under the direction of an English Sister of Charity, and two English surgeons have undertaken to give gratuitous attendance.—*London Lancet.*

CLINICAL CASES IN THE CITY HOSPITAL, ALBANY.

Reported by Ira D. Brown, Resident Physician and Surgeon.

[Communicated for the Boston Medical and Surgical Journal.]

Radical Cure of Prolapsus Uteri.

Harriet F., aged 47, widow, was admitted to Hospital in August last, suffering from prolapsus uteri, to which she had been a martyr for more than eight years, the prolapsus coming on immediately after the birth of her second child. During these eight years she had been treated by several physicians, had used astringent injections, worn various kinds of pessaries, &c., without relief. The entire uterus protruded at the external labia, presenting the appearance of a good sized pear, the strain upon the ligaments producing great pain. So great was its disposition to fall down, that the uterus could not be kept in the vagina when the patient was in the recumbent position.

Dr. March operated September 30th. The uterus was pushed up within the vagina and held there by the handle of a knife in the hand of an assistant. The labia were then denuded of mucous membrane with the knife and scissors over a space of some two and a half inches in length, and were brought together by means of the quill suture, the object being to promote adhesive inflammation between the two cut surfaces, leaving a small opening above and below, sufficient for the discharge of urine and vaginal secretion. The patient having ceased to menstruate, and being a widow, readily consented to this partial closure of the orifice of the vagina, when it was explained to her that it would effectually prevent falling of the womb from which she had so long suffered. A catheter was introduced into the bladder and the patient was placed in bed, the mouth of the catheter being placed in a bottle in such a manner that the urine could flow into the latter.

The wound healed kindly, and the sutures were removed on the fifth day, when it was found that the labia were united by the first intention. A little sloughing occurred at the lower portion of the wound, which was corrected by the application of caustic to the edges and the use of a single wire suture. The latter was removed on the eleventh day, the catheter having been removed on the eighth. Three weeks after the operation the patient sat up several hours, and in four weeks was walking about entirely free from the pain that had been her constant attendant for eight years. She was discharged cured, November 7th, expressing great gratitude for her recovery. I saw the patient again, December 1st, and learned that she continued entirely free from prolapsus.

Incipient Hip-Joint Disease Mistaken for Dislocation.

Allen Holden, a boy 14 years of age, was admitted to Hospital Nov. 21st, having been sent from the town of F——, about eighty miles from Albany, to be treated for what his attending surgeon had

diagnosticated as irreducible dislocation of the head of the femur. The patient was a stout, well-built lad, who had been hearty and active until eleven days previous to his admission to the Hospital, when he fell down the hatchway of a canal boat, a distance of about eight feet, twisting his thigh violently, but producing very little contusion. After the accident, he was unable to walk; the limb seemed lengthened, his toes everted, and two physicians who were called pronounced it a case of dislocation of the head of the femur downwards into the *obturator foramen*. An effort was made to reduce the apparent dislocation, without restoring the natural appearance of the limb. The surgeons attending then placed the patient under the influence of chloroform, and set to work with a couple of stout men to assist. After some very vigorous pulling, the effort at reduction was abandoned, and by advice of the doctors, the patient was sent to this Hospital and placed under the care of Dr. March.

The following were the symptoms apparent on the patient's admission, eleven days after the accident:—Some soreness in the joint; an apparent lengthening of the limb, so that the internal malleolus of the affected limb was two inches below that of the sound one, when the patient lay upon his back. The same lengthened appearance was perceptible when the patient attempted to stand. The limb could be rotated outwards and inwards freely, however, and could likewise be carried across the other leg without causing pain. The toes were somewhat everted. Notwithstanding the apparent lengthening of the limb, which was a most prominent symptom, measurement with a tape line from the anterior superior spinous process of the ilium to the internal malleolus showed no difference in the length of the limb as compared with its fellow. This measurement was tried over and over again by different persons present, and with the same result. There was no difference in the length of the legs by the tape line, notwithstanding the fact that any person could see at a glance that the malleolus of the affected limb was fully two inches below that of the sound one. On passing a line from one anterior superior spinous process to the other, it was found to run diagonally, and hence it was obvious that the apparent lengthening was due to a tilting downwards of the pelvis, and not to any lengthening of the limb itself.

The diagnosis was, therefore:—No dislocation at all, but symptoms of hip-joint disease *(morbus coxarius)*, in its incipient or forming stage, following, as it probably always does, a traumatic injury of the joint.

The patient was put to bed and ordered to remain perfectly quiet. Warm emollient applications were made to the hip; a purgative was administered, and after its operation, alterative doses of calomel with Dover's powder were given.

Under this treatment the improvement was remarkable. The soreness disappeared, and—more wonderful still—the symptoms of dis-

location which had so much troubled the doctors at F——, also disappeared. In a few days the lengthening was scarcely apparent; the two malleoli came opposite each other, and at the end of a week the patient could step on the affected leg. He was taken home after remaining in the Hospital eight days, but was directed to keep quiet for two or three weeks as the most effectual method of guarding against the serious disease of the joint with which he was threatened.

The case may be of interest to many professional gentlemen, and may save them the chagrin of having attempted to reduce a dislocation where none existed. In this instance it cannot be doubted that the severe pulling given to the limb increased the danger of hip-joint disease.

CLINICAL LECTURES ON AMBLYOPIA AND AMAUROSIS, BY PROF. A. von GRAEFE.

[Continued from page 380.]

The course of the most desperate form of amaurosis is as follows. Slowly, but not regularly so, in the course of months or years, the field of vision of the first eye becomes contracted (generally irregularly, laterally), its acuteness of vision diminishes, atrophic degeneration of the papilla takes place, and the organ is lost, while after the first eye has begun to be affected, sometimes not till after its entire loss, the second commences to run the same course. These cases are, indeed, utterly hopeless; they are regarded as a *noli me tangere* by the experienced physician, who cautiously refrains from active treatment, knowing that this may easily harm, and at the best can be but of little service.

A few remarks may be added on the nature of amaurosis. Where there are no objective intra-ocular symptoms in cases of impaired vision, we are apt to speak of cerebral or spinal amaurosis. In the more favorable and curable forms of amblyopia there must exist anomalies in the circulation or nutrition, to which pathological anatomy gives in general no satisfactory solution. In those cases, too, progressing towards blindness and attended with disorganization of the papilla, we are by no means invariably able to find evidences of change in the central organs. Atrophy of the nerve-fibre and ganglion-cell layers of the retina is generally found; at the same time, also, atrophy of the optic nerves, sometimes stopping at the chiasma, sometimes prolonged beyond, coupled with atrophic alterations in the thalami and corpora quadrigemina. If, accordingly, the amaurotic process is to be regarded as no more than a progressive atrophy of the optic nerve and retina, an atrophy the course of which —whether towards or from the centre—is still doubtful, it is yet undeniable that this partial atrophy is associated in a considerable proportion of the cases with a widely diffused affection of the cen-

tral nervous system, and may therefore be regarded in some cases as a remote consequence, in others as simply indicating the region in which the disease first makes itself felt. Especially interesting is the connection of progressive amaurosis with paralysis and mental alienation, and thus with gray degeneration of the spinal cord. It is well known that amaurotic affections not infrequently supervene on disordered states of the intellect; but sufficient stress has not been laid upon the fact that a large number of those attacked with amaurosis, who were in perfect possession of their faculties when first affected, are subsequently the victims of dementia. While, therefore, amaurosis may not infrequently be looked upon as a premonitory symptom of mental derangement, the reverse is almost without exception the case in gray degeneration of the spinal cord. Characteristic symptoms of the spinal affection (impairment of sensibility) have become settled before the advent of the amaurotic affection. This may be explained by the anatomical fact that the course of the degeneration is from the vertebral column towards the interior of the skull. Of all the many cases of spinal amaurosis (forming, as they do, some thirty per cent. of the graver forms of progressive amaurosis) which came under my observation, I can recollect but two instances where the disease progressed in an opposite direction. In the one the amaurotic long preceded the spinal affection, the patient having been entirely blind five years before the first eccentric pains, followed by the usual signs of tabes, made their appearance. In the other, the amaurotic affection had also lasted several years, but at the time of occurrence of the spinal disease there remained some perception of light in one eye.

As many different opinions prevail concerning the minute anatomy of progressive atrophy of the optic nerve, as with regard to its kindred affection—gray degeneration. Have we to do with a primary inflammation in the interstitial connective tissue of the nerve, terminating in the disappearance of the conductive elements, or are we to regard the disease as a genuine atrophy and to consider the connective tissue, which has taken the place of the nervous elements, simply as a supplementary structure? Certain symptoms during the course of the disease, such as attacks of frontal headache, altered demeanor, sleepiness, which often disappear as the blindness progresses, offer us a strong inducement to clinically maintain the hypothesis of a primary stage of inflammation. Still we must admit that these signs allow of a double interpretation, and that the violent eccentric pains which accompany tabes dorsalis give much more ground for supposing previous inflammation. And yet the fashionable theory of this disease inclines more than ever to genuine atrophy. A decision based on anatomical grounds, which should be final, is a matter of great difficulty, the opportunities of examining the disease in its earlier stages being so rare. It may be regarded as a fixed fact that there is no question of an inflammation of the nerve connective

tissue, in the ordinary sense of the word, in amaurosis or tabes dorsalis. The best proof of this is furnished by the inspection of the optic papilla, a thing possible from the first stage of the disease. The changes here are essentially different from those of neuritis, of which we may obtain so perfect a picture. But we see that the change in the connective tissue is not always the same. Sometimes we have a simple loss of substance (atrophic excavation), the most perfect type of a true atrophic process; sometimes there occurs a gradual consolidation of the connective tissue (the papilla growing smooth, white and opaque, while the lamina cribrosa becomes hidden), in which case the connective tissue may be the seat of some very delicate inflammatory process, very different from the ordinary one. But enough of this. We have speculated beyond the limits allowed by our empirically acquired facts, and ventilated certain obscure questions more than in the present state of science may be profitably done. Let us return to the examination of cases, and attempt to utilize what has been brought forward in the study of the various forms of disease.

Case I.—*Curative form of Congestive Amblyopia, with Normal Field of Vision.*

Florian M., railway employée, æt. 49, of healthy appearance, cheeks and extremity of nose of rather a venous redness, comes on account of impaired vision of both eyes. This has been creeping on for the last twenty months; at first very gradually, during the last four months, however, has perceptibly increased. The functional examination shows that the acuteness of vision (tried by average daylight) has fallen in the right eye to $\frac{1}{6}$, in the left to $\frac{1}{7}$. The periphery of the field of vision (examined by softened lamplight) proves to be *absolutely normal*, and in accordance with this there can be found neither interruptions, misty spots, nor breaks in the acuteness of eccentric vision. Inspection discovers nothing abnormal about the exterior or interior of the eye; indeed, in spite of the already considerable duration of the disease, the papilla retains its delicate red, semi-transparent color.

Its nasal segment is appreciably more reddened than the temporal, owing to the greater number of small vessels and the thicker layer of nerve-fibre in the first direction. To this may be added that the inner is not so sharply defined as the outer edge of the choroid, still a careful inspection reveals the whole contour. Such a condition of the papilla may be regarded as entirely physiological, provided nothing abnormal be found in the vessels and the tissue. It is more or less marked, according to natural varieties in the optic nerve, and shows best generally in a case of physiological excavation. The larger veins are well filled, but are not abnormally tortuous, either as regards their own axis or the plane of the retina. We cannot, then, consider this as a symptom of disease; all the less, in fact, because the patient's complexion bears evidence of habitual venous engorgement.

An investigation of the case shows that the patient has for a long time indulged moderately in brandy, drank large quantities of beer, smoked considerably, and had his rest broken by the duties of his

calling. He has suffered from neither digestive nor cerebral disturbance, and enjoyed good health. The result of the examination of the organs of respiration and circulation, the pelvic viscera, the skin and the urine is negative.

As regards the *prognosis* of this case, we may venture on an opinion in every respect favorable. In the first place, a progressive blindness is not to be feared in the least; for in spite of the long continuance of the disease the boundaries of the field of vision prove to be entirely normal. But we may even speak confidently of improvement and restoration of vision, for (1) the continuity of the field of vision is entirely uninterrupted; it is only an affair of general diminution of sensitiveness, no indication of a central scotoma being present; (2) the appearance of the optic papilla is unchanged; notwithstanding the difficulty has lasted two years, there is no trace of atrophic degeneration; (3) in the habits of life of the patient we find palpable causes, amenable to therapeutic influences, and of a kind that experience teaches us may produce derangements capable, to a certain extent, of removal.

It would be a difficult task to accurately explain the *nature* of this affection. No signs of active cerebral congestion exist. The venous redness of the face and the predisposing causes render probable a so-called passive congestion; this expression, however, conveys but a limited amount of information. Suppose the case to be one of an inundation of the central nervous structures with venous blood, or of a want of rapidity in the movement and change of the blood itself, or let there be a diminished activity of function on account of the blood being overloaded with alcoholic and narcotic substances—every one of these suppositions would be explained on the ground of "passive congestion of the brain." The only general and satisfactory use of this term is, therefore, in cases where, there being no signs of active congestion, the functional as well as the nutritive activity of the cerebral centre of the optic nerve has been reduced by influences springing from the source alluded to and acting through the circulation.

How is the *cure* of the case to be effected? First, of course, by paying a proper regard to its cause. The use of alcoholic beverages must be given up, that of tobacco reduced to a minimum, regularity in diet and sleep insisted on. Not infrequently is this course alone sufficient to cause a gradual retrogression of the symptoms in cases of this form of amblyopia. Experience teaches us, however, that there are more efficient means of securing and hastening a favorable result. As regards local depletion, a rapid evacuation of the blood is here of special importance. I was some time since led by this to appreciate the application of the leech of Heurteloup in the treatment of congestive amblyopia, and the method based on this has found much favor with the profession.

A good deal depends here on the manner of application. If the operator to whom we commit the task is not competent to fill a cylinder in a few minutes, the particular advantage* of this method is lost. The application must be made in the evening, so as to give the full benefit of the night's rest. It is, moreover, desirable in many cases that the patient should preserve perfect quiet the next day and remain in a dark room. As the importance of this precaution in such case depends on a careful consideration of the individual circumstances, it is best to regard it as a general rule. It is of consequence on account of the excitability of the cerebral circulation, or—if preferred—of the vaso-motory nerves. In cases where this is considerable, each application is followed by a period of excitement, characterized by derangements of sensibility of every kind, sometimes by subjective appearances of light, and even by some diminution of the acuteness of vision. This period of "reaction," lasting only in exceptional cases more than a day, should be prepared for by entire bodily rest and a strict seclusion from light. This state, moreover, is least marked in cases of amblyopia arising from passive cerebral congestion, and most so in certain affections of the choroid; the period of rest, therefore, is less indispensable in the former case than in the latter. From two to four ounces of blood should be taken at each application. And this should be repeated at intervals of four, six or eight days, according to the constitution of the patient and the duration of the period of reaction. A careful examination of the acuteness of vision instituted directly prior to and two days after the application (the period of reaction being thus passed) will decide the propriety of repetition. Where the acuteness of vision has not been affected by two, at the most by three applications, they should be omitted. But even where a perceptible effect is noticed, I do not advise a too frequent repetition in cases of passive cerebral congestion, although of course the state of the constitution must influence the decision in individual cases. For it has been ascertained that those cases which evince improvement after the first three or four bloodlettings, do better under diaphoretics than by a continuance of the abstraction of blood, and it is our duty—other things being equal—to give the first named the preference as a less severe course.†

Our diaphoretic treatment was principally (in imitation of many older practitioners) carried out by means of the decoction of Zittmann, not because any specific effect is to be attributed to the separate ingredients of this complex draught, but because experience has shown it to be an excellent diaphoretic of proved worth. The strong decoction, warmed, was therefore given at an early hour to the

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* Be it said, in this connection, that the Heurteloup leech, rendering, as it does, most valuable service in congestive amblyopia and chronic affections of the choroid, is by no means as good as the natural one in the treatment of the different forms of ophthalmia. It is here that we derive more advantage from a prolonged suction and a continuous flow of blood than from the rapidity with which it is lost.

† Although warmly recommending the Heurteloup leech in cases of amblyopia with passive cerebral congestion, I am willing to admit that some cases derive more benefit from other measures. This is especially the fact when the excitability of the circulation is extremely pronounced. Here the period of reaction is seen to be abnormally lengthened and indisposed to yield to the desired remission. In such cases a decidedly better result is often obtained from cupping in the neck, in hæmorrhoidal affections from leeches to the anus, and in disorders of menstruation from cupping on the inside of the thighs; indeed, under these circumstances the Heurteloup leech may even increase the disturbance and harm the case. The question so often raised in practice as to whether the removal of blood shall take place from the immediate vicinity or at some distance from the affected part, depends in a measure on the method employed, and especially on the degree of excitability, and considerable caution must be used in answering the question in the first sense. A common mistake in cases of ophthalmia is to place the leeches nearer the eye than consorts with the sensitiveness of this organ and the surrounding structures. Further individual circumstances may sometimes induce us to employ other applications in preference to the Heurteloup leech on the temple, as when the disease seems, for example, to be connected with the cessation of habitual epistaxis, or of a hæmorrhoidal flow, &c.

patient in bed, and its action on the skin assisted by means of woollen coverings and afterwards by elder-tea, while on the other hand no special restrictions with regard to diet, as is generally the custom when this preparation is used, were imposed on the patient; a walk, too, in the afternoon was allowed when the weather was favorable. Of late we have been more sparing in the employment of the decoction of Zittmann, having learned to recognize a thoroughly invaluable therapeutic agent in well-appointed Roman baths.*

The patient was again presented at the clinique four weeks after the commencement of his treatment. His course of life had been regulated and the Heurteloup leech applied three times, in consequence of which his acuteness of vision had successively increased from $\frac{1}{6}$ on one side and $\frac{1}{7}$ on the other to $\frac{1}{4}$ on each. Following this, a Roman bath had been taken every three days. No result followed the first bath, except a headache which lasted twelve hours, owing to the fact that he had not remained long enough in the sweating room and had been disturbed by the application of a cold douche at the wrong time. The next baths, in the administration of which these points were attended to, produced an excellent result, the acuteness of vision having risen, after the fifth had been taken, on the right to $\frac{2}{3}$, on the left to more than $\frac{1}{2}$. A speedy and entire recovery is therefore no longer doubtful.

Von Graefe remarks, in conclusion, as follows. Recovery does not follow as rapidly in all these cases of amblyopia as in the present. If, however, appropriate treatment succeeds in once causing the affection to take such a turn that the acuteness of vision begins to increase, we may reckon with nearly entire confidence on a gradual and almost spontaneous improvement, provided the cause of the difficulty continues to be avoided. The attempt must not, therefore, be made to perfect the result by continuing the employment of vigorous measures during a prescribed time, but rather, after the first blow has been administered to the disease, it should be left to itself awhile, after which the former treatment may be resumed. Thus the entire amount of previous vision may often be seen to return in the space of several months or more. On the other hand, a strong tendency to relapse may be manifested, when, owing to a faltering resolution or the pressure of circumstances, the patients again come within the influence of the previous exciting cause of the disease; in fact, such relapses may exhibit a paralytic tendency, differing from

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* My first inducement to employ Roman baths in cases of amblyopia with passive cerebral congestion was furnished me by a patient who had been but moderately benefited by a course of decoction of Zittmann, and who entirely cured himself of his amblyopia by remaining in the warm boiling-room of a sugar-factory, the heat being nearly 40° (122° Fahrenheit). Great advantages as the Roman baths possess in most of these cases over the Russian baths, they have, of course, their contra-indications, among them the more active states of congestion, and especially cardiac and renal affections, an apoplectic tendency and undue excitability of the circulation.

[These "Roman baths" are known in this country as Turkish baths, and differ from the Russian in the employment of dry heat instead of vapor.—Translator.]

the previously mild form (as in the case of amblyopia potatorum). This teaches us how necessary it is to lay particular stress on the manner of life of such patients and regulate their labor. Finally, be it remarked that while we very frequently employ the course that has here proved itself efficacious, it should by no means be regarded as the exclusive method of treatment in such forms of the affection. No cases need more individual study than those of amblyopia, and the physician who after a single and hasty survey undertakes to give such patients advice available for some time to come, commits a serious fault. The derangements in the circulation which are here concerned may spring from the most varied sources, and it is both perilous and narrow-minded to deduce them by preference from some particular organic affection, from the liver, for example, or the alimentary canal, or some irregular course of life. Abdominal disorders, it is true, often play a principal part among the causes, and in accordance with this view, we often see good effects resulting from the use of mineral springs, such as Marienbad, Kissingen, Homburg, and in suitable cases particularly Carlsbad; as a general thing, however—thanks to the prevailing tendency—the functions of the abdominal viscera occupy too exclusively the attention of the physician. The weighty functions of the skin and kidneys, so important in their effect on amblyopic affections, are among those seriously neglected through this preference. While the regularity and amount of the fæcal evacuations are anxiously dwelt upon, these principal regulators of the circulation are hardly regarded, as being of minor importance. Even the ways of life, from which but too often proceed the accumulated causes of derangement of the circulation, are often but carelessly scanned by the physician, and as a matter of course made light of by the patient. If the sleep be not particularly disturbed, little is said about it, and yet good and regular sleep affords the most grateful refreshment to the unceasingly active nerve of vision. To be here a successful physician, one must examine with extreme care and weigh the result with foresight and impartiality.

[To be continued.]

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY. BY JOHN GREEN, M.D., SECRETARY.

Sept. 30th, 1865.—*Successful Removal of the Uterus—Ovariotomy.*—Dr. H. R. Storer reported a case of large abdominal tumor, in a woman 47 years of age, which, from its localized fluctuations, might have been supposed to be a multilocular ovarian cyst, had it not been for peculiarly solid tumors in the right iliac region. Under ether, he made vaginal and rectal examinations, the former being very difficult, ow-

ing to extreme narrowness of the vulva. The disease was of five years' standing, and the patient was ready to submit to anything which might offer the chance of relief. She was kept a month under observation, and was treated during this time by the tincture of chloride of iron, together with pills of two or three grains of dried ox-gall twice a day.

September 23d, with the assistance of Drs. Dix and Langmaid, Dr. Storer operated by an incision five and a half inches in length. An elastic tumor presented itself, having extensive adhesions—on the right to the mesentery, and on the left to the peritoneum. On freeing this tumor from its adhesions and lifting it up from its bed, a second growth was found occupying nearly the whole pelvic cavity, and connected with the first by a slender pedicle. The second tumor was removed by constricting its neck with the chain of the ecraseur; it proved to be the uterus, and was cut off through the cervix. About ten ligatures of wire were used in securing the bleeding vessels, and they were allowed to fall back and remain in the abdominal cavity. The pelvic cavity was freely exposed to the air during an hour before the oozing ceased. The external wound was closed by five sutures of wire. The patient was kept etherized during three hours. No especial attention was paid to the temperature of the room. The weight of the masses removed was thirty-seven pounds. The tumors were exhibited by Prof. Jackson, and their several relations, as shown by careful dissection, exhibited—they being an instance of the rare fibro-cystic disease of the uterus, so called.

The external wound united by first intention. No suppuration occurred.

Oct. 28th.—Dr. Storer reports that "the patient has steadily convalesced, without a single bad symptom; has been upon her feet for some days, and intends leaving for home to-morrow. She is now upon her thirty-fifth day from the operation."

Nov. 28th.—She is reported as "perfectly well."

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, DECEMBER 14, 1865.

Ovariotomy—The Operation in France.—Perhaps there is no question in surgery on which the medical profession are more divided at the present day than upon the expediency or justifiableness of ovariotomy. The great success of some operators in whose practice the mortality has been reduced so low as thirty, twenty per cent., or even lower, while in the case of others it has been as high as seventy per cent., would seem to make the issue of the operation to depend very much on the individual skill and judgment of the operator. As is well known, this operation has not hitherto stood well in the estimation of French surgeons. M. Koeberle, of Strasbourg, however, has recently done something to shake their confidence in this position by operating with success in twelve cases out of thirteen. A recent letter from Paris, by Prof. Charles A. Pope, of St. Louis, published in the *St. Louis Medical and Surgical Journal*, gives an interesting and instructive account

of this operation as done at the Hospital Lariboisière under his own observation. If this is a fair sample of the operation as done in Paris, we think our readers will agree with us, that much is yet to be learned by our French brethren as to the true methods of doing it before they will be in a position to pronounce with authority upon its advisability. In a previous letter, Dr. Pope had given an account of the same operation done unsuccessfully by M. Nélaton, which he criticized with great freedom. The following is an extract from the letter referred to :—

"If the last case of M.Richard be a sample of the method of performing the operation, it will sufficiently account for the fatality of such attempts in the Parisian hospitals, and of the general prejudice which exists here against the operation, Velpeau and the older surgeons strenuously condemning it.

"The patient of M. Richard was a young woman, not much emaciated, and in a comparatively good state, who had been afflicted for nearly two years. The tumor was unilocular, and of large size. Chloroform being administered, an incision was made from a little below the umbilicus to the symphysis pubis, through the linea alba to the cyst, which was found adherent. Every little vessel was most carefully secured. The sac was now punctured by a large-sized trocar, *ad hoc*, intended in cases of non-adhesion to empty the sac without allowing the escape of the fluid into the peritoneum, which is accomplished by a mechanism holding the walls of the sac and the peritoneum firmly together. The adhesions being neither very firm nor extensive were easily overcome, when the emptied sac was lifted out, and its pedicle secured by transfixion with a needle armed with a stout double ligature and a firm knot made on either side. The peduncle was now severed. Then commenced the search for the minute vessels, and numerous ligatures were applied. In seeking for every minute orifice, although having an opening of eight inches, the surgeon further divided the abdominal walls with a pair of scissors, and applied additional ligatures, both to the walls and to the interior of the abdomen. As there was still some slight oozing, a second *débridement* of the abdominal walls was made with the scissors as before, the incision now reaching to the xyphoid cartilage, which, as he could go no further, seemed to satisfy the surgeon. Whenever a single drop of blood, venous or arterial, could be espied, the operator, after much sponging, seized it largely with his forceps, and an aid, throwing on a ligature, included quite a mass of tissue. In every case, both ends of the ligature were cut short off. The liver, spleen, bowels, uterus and bladder were pulled and hauled, and their surfaces constantly dabbed and rubbed with sponges, the operator remarking, meanwhile, that the peritoneum was a '*très bon garçon*.' It is true that this membrane will bear much, but why the surgeon should think that the presence of a few drops of blood would prove more harmful than his rough sponging, ligature-nooses and sloughs, is almost beyond belief. The operation lasted three hours by the watch, and the exact number of ligatures—complete notes having been kept throughout the operation by an *externe*—was *sixty-one*.

"The external wound was now brought together by silver sutures, the peduncle, after the manner of Dieffenbach, having been secured in the lower part of the external incision ; over the wire sutures, a mul-

titude of narrow adhesive plasters, six inches long, were applied, one over the other, like a scultet bandage, the whole length of the wound; over these again there were long transverse bands of sticking plaster, and over these fenestrated compresses of thin cloth, smeared with a blackish anodyne salve, covering the whole abdomen; and over this again were placed thick layers of cotton batting; and lastly, over all was secured the ordinary body bandage. This was called a dressing 'by occlusion.' But of what use was the occlusion when the abdomen had been so roughly handled and exposed for three mortal hours; when the numerous nooses, and their included sloughs, were all carefully kept within the abdominal cavity? The patient's doom was necessarily sealed; nor can I conceive how, under the most fortunate circumstances, it could have been hoped that so many foreign bodies could have found their way out alongside of the included peduncle. The patient died the same night, reaction not having been established.

"I could not help contrasting this operation with one of my own successful ones, in which the adhesions were very firm and extensive, made more so, perhaps, by the repeated injection of iodine. I divided the peduncle with the ecraseur; did not apply a single ligature; brought the wound together by silver sutures, and applied a few broad, adhesive strips, a light compress and the usual body bandage.

"Good fortune has much to do with the success of an operation, but a worse one than this of M. Richard I have seldom witnessed. In relying on the *très bon garçon* peritoneum, he certainly imposed on its goodness. On its conclusion, the surgeon congratulated himself on having thoroughly performed all the required steps, and having neglected nothing essential to success. His error was in having done too much, and in having been over-cautious."

Cholera—The Law of the Present Epidemic.—The *Archives Générales de Médecine* for October, in speaking of the progress of the cholera, says:—

"Unfortunately, experience teaches that telluric currents, of which the existence has been so often supposed and contested, play but a secondary part. Maritime communications, subjected to all the chances of navigation, escaping all calculation, have been in the present epidemic of a very different importance. We may say that, if the cholera has radiated by land from its foci, it is by way of the sea that it has accomplished its propagation at great distances.

"Our profound conviction, shared by all who have wished to ascertain the truth, is that cholera, wherever it develops itself, is always imported, and that nowhere is it spontaneously produced. Great masses of men in motion, armies like those of the pilgrims of Mecca or of India, are so many moving foci, which, after having, so to speak, hatched the disease, convey it about. In 1851 it was the war in Poland: in 1848 it was Europe in arms: in 1854 it was the Crimean war. Thank God, the cholera has not at the present time these formidable auxiliaries.

"Unfortunately, it has a power of progression, which seems to be inherent in the disease, and which compels it to continue its march, after stopping for a time in each great centre of population. By one

of those laws which impress upon epidemics a strange individuality, cholera stops and remains stationary for a length of time, which may be almost determined in advance. When once its fatal purpose is accomplished, it quits the focus where it has been concentrated and resumes its interrupted journey. At Alexandria, at Cairo, at Constantinople, the epidemic continued from six weeks to two months. Neither atmospheric changes, nor precautions of any kind, nor carelessness or misery have abridged or prolonged its stay. If the number of its victims was diminished by enlightened precautions, the duration of the epidemic remained the same.

"Beyond this law all is doubt and uncertainty with regard to the direction which this malady will take in leaving its temporary foci; *and the propagation of cholera during previous invasions authorizes no conclusion applicable to the present epidemic.*"

We have italicized the last passage in the above extract, as it has a special significance for us on this side of the Atlantic at the present time. It expresses the opinion of one of the highest living medical authorities, and it is entirely in keeping with the views which we have heretofore expressed. It will not do for physicians here to be governed entirely by their experience during former epidemics in America, and disregard the teachings of the present hour, as they come to us every day across the water. We see physicians there, without a dissenting voice, so far as we have learned, adopting the view of the ready communicability of cholera, as the lesson of the present epidemic. Let us not hesitate to profit by that lesson, and promptly and efficiently avail ourselves of all the means which it indicates as most likely to shut it out altogether from our borders.

By the last accounts cholera seems to be disappearing from the countries which it has invaded. In England it has nearly died out. In Paris it seems to have been much more severe than has been generally surmised. During the height of the epidemic it was impossible for the public to obtain accurate data of the extent to which it prevailed, owing to the extreme reticence of the government on the subject. Of late there has been a relaxation in this respect, and the published bulletins from day to day, as late as Nov. 3d, show that the disease was rapidly subsiding. In the southern departments of France, the cases were much less numerous, especially in those which were first attacked. In Spain the disease has nearly disappeared. In Italy it still prevails in a number of places, but the number of cases does not seem to be very large. On the contrary, it is advancing northward through Russia, and is also extending into western Asia. At Malta a quarantine of twenty days is still kept up on all vessels arriving from Alexandria.

Death by Hanging.—The *Medical and Surgical Reporter*, in a notice of Dr. Alexander E. Hosack, states the following curious facts:—

"For many years, Dr. Hosack turned his attention to capital punishment, and the various modes adopted for inflicting the ends of justice on the sentenced. Especially did he study the subject of death by hanging, and purposely witnessed the execution of many criminals. The result of his examinations was to the effect that they suffered no pain, but gradually became asphyxiated and lost all power of sen-

sation. In one instance, the doctor told me that a mulatto, named Hill, had been sold as a slave to a party in New Orleans, and while on his way to Louisiana, had joined a conspiracy on board the vessel to seize the captain, and if necessary, put an end to his life. He was discovered, tried, and sentenced to be hung. Through the agency of the officiating clergyman who administered spiritual consolation to the condemned man, Dr. Hosack obtained an interview, and having explained to him his object in making this scientific request, exacted from him a promise to exhibit, as far as consciousness would admit, the state of his feelings as regards suffering while being hung. Dr. Hosack also persuaded the Marshal to permit the prisoner's arms to be bound so loosely that he was enabled to clap his hands if, as agreed upon, he did not feel pain. The day arrived for the public execution, the place was crowded and all in readiness. Dr. Hosack, as attending surgeon, was permitted to take a favorable position, and watch each movement of the dying man—a whispered recognition told him that poor Hill would keep up signals till the last—and at the given word the body of the unfortunate was hoisted up. Instantly, Hill brought his hands together and continued to clap them gently for the space of one minute and a half, at the end of that time he gradually lowered his arms, and, as it were, lost the power of discrimination, his brain being so beclouded by dark blood that he could no longer act voluntarily. A few convulsive efforts, followed by immediate death, at length closed the melancholy scene and life became extinct, at the expiration of nine minutes and a half. Now as it was directly the reverse of what the man would have done if he suffered, or the opposite of the natural motions of the arm if he had left them to their instinctive impulse, this is very decided evidence that no pain was endured, and must prove of great value to the scientific world at large, and the lovers of humanity in particular. It is rare indeed to find a punishment as degrading as hanging, and as merciful in its results.

"In speaking of the curious effects of hanging on some persons, Dr. Hosack mentioned to me that celebrated case in Paris, where the mistress of a wealthy nobleman was tried for murdering him. He had been found dead in his room, suspended by the neck. She was the last person seen coming out of his chamber, and every circumstance seemed to point against her as the perpetrator of the crime. But when called upon to answer the charge, she made a statement that not only staggered the court by its singularity, but freed her from punishment, because it was acknowledged by the Judge to be beyond the power of invention to have originated an idea so unparalleled in its uniqueness. This French woman confessed that the Duke had dissipated so extensively in his earlier days that his passionate desires could not be sufficiently roused by the ordinary methods of erotic stratagem, so that when he wished to have connection, in order to bring about priapism he was accustomed to hang himself gently and gradually, and this produced the longed-for effect. She stated that on the said melancholy occasion he had excited her anger, and she had not cut him down as soon as usual. The consequence had been death. She was accordingly discharged. Here we have an argument, startling in its character, that hanging not only causes no pain, but at least in one instance was adopted for the express purpose of gratifying the cerebellum."

Portion of Small Intestines Passed by the Rectum.—Dr. E. R. Peaslee presented the intestine of a girl of 17. In the summer of 1863, she suffered from what seemed uterine colic. She experienced several similar attacks in 1864, until she died in October of that year. She had attacks of fæcal vomiting, and her only alvine discharges were by enemata. In May, 1864, after one of these enemata, she discharged from the rectum five or six feet of what was suspected to be part of the intestine of some lower animal.

The *post-mortem* showed the small intestine to be only sixteen feet long, instead of about twenty-two as usual. Above the junction of the jejunum and the ileum, there was a contraction, and below this the intestine was small. The portion passed had doubtless sloughed off from the small intestine, after an attack of intus-susception, between four and five months before her death.—*St. Louis Med. and Surg. Jour.* from *Proceedings New York Obstetrical Soc.*

On the Germinal Matter of the Blood, with Remarks upon the Formation of Fibrin.—By Lionel S. Beale, M.B.—Applying his general views upon "germinal matter" and "formed material" to the blood, Dr. Beale believes that the white blood-corpuscle consists of the former, the red corpuscle of the latter, and that in red corpuscles possessing nuclei, the nucleus represents the germinal matter. In regard to a cell-wall, Dr. Beale urges some striking observations disproving its existence. Taking, for illustration, the red blood-corpuscle of the frog, the outer part which cannot be colored by carmine, is "formed material" which was once in the state of "germinal matter," and was capable of producing matter like itself, and of being resolved into colored formed material. But this formed material once produced cannot form matter like itself, although it can be changed, dissolved, and converted into other substances. It is the seat of physical and chemical actions alone. Vital changes are restricted to the germinal matter. In the nutrition of the blood-corpuscle, pabulum passes through the outer colored portion into the germinal matter, where it acquires the same vital powers which the germinal matter already existing possesses. When blood becomes stationary the white corpuscles and the nuclei of the red increase in size and subdivide. In such circumstances "granular corpuscles" may be developed from the white or from young red corpuscles. In adult mammal's blood are certain corpuscles, granular in appearance, colorless, and much smaller than the ordinary red corpuscles; so small, in fact, that they can only be seen by powers magnifying upwards of 1000 diameters. These corpuscles, the author believes, to consist of germinal matter which has just commenced to undergo conversion into red formed material. The red corpuscles vary in size much more than is commonly supposed, and they differ very much in transparency and refractive power, some being only just visible in consequence of the extreme transparency of the material of which they are composed.

In the second paper quoted above, Dr. Beale advances some very remarkable views. He believes in the existence of very minute particles of germinal matter (less than the $\frac{1}{4000}$th of an inch in diameter) in the blood. These masses of germinal matter multiply by a protru-

sion taking place from the surface, and final separation into two separate masses. Nuclei may arise in these masses. In inflammation of the vessels of the frog's foot, the increase of white corpuscles is not alone dependent on arrest of the circulation, but the corpuscles actually multiply in the clot. In regard to the development of cells in exudations, the author advances the view that "exudations," although clear fluids, really contain a multitude of extremely minute particles of living matter, which are intimately related to the white blood-corpuscles and that these grow and become one source of small "granular cells" or corpuscles. Further, living or germinal matter may retain its vitality, so that particles may be formed in one organism and be carried to another where they may grow. It seems to the author probable "that many contagious diseases are due not to the propagation and transference of vegetable organisms, but to small particles of living animal matter which have descended from the germinal matter of one organism, and have been transferred to another." Finally, in reference to the formation of fibrin, Dr. Beale holds that it is "the result of a vital process," that it is "formed material," and "that living germinal matter becomes fibrin."—*Edinburgh Medical Journal* and *Journal of Microscopical Science*, vol. iv., 1864.

Clinical Facilities in St. Louis.—Within the past few years the advantages for clinical teaching in St. Louis have so much increased, that in this respect we have the advantage of any of the Western and most of the Eastern schools of medicine.

The St. Louis Hospital, under the charge of the Sisters of Charity, is centrally situated, and has always been, and now is, a well-regulated institution. Here clinical material is made abundant, and the more so since poor persons are treated gratuitously, while out-patients, also, receive attention.

Dr. Pollak and Dr. Pope have at this establishment an eye and ear clinic three times a week, which is well attended. Here medical students may receive a practical knowledge of this important class of diseases.

The City Hospital, on the corner of Soulard and Fourteenth streets, is sufficiently accessible, being near the line of the People's Railroad. This building is capable of containing three hundred patients, and is generally well filled. Being purely a charity, it receives every variety of medical and surgical malady.

Through the kindness of the Board of Health, members of the Faculty of the St. Louis Medical College are Consulting Physicians and Surgeons, and visit it as often as their services are required: while Dr. Paddock, the accomplished and experienced physician in charge, is careful to do all in his power to furnish suitable cases for bedside teaching.—*St. Louis Medical and Surgical Journal.*

Auxiliary Faculty of Medicine in the University of Pennsylvania.—At the meeting of the Trustees of the University of Pennsylvania held on the 7th of November, the following gentlemen were elected to fill the chairs in the new faculty recently created by the munificent endowment of Prof. Geo. B. Wood :—

1. Zoology and Comparative Anatomy, Harrison Allen, M.D.
2. Botany, Horatio C. Wood, M.D.
3. Mineralogy and Geology, J. C. Hayden, M.D.
4. Hygiene, Henry Hartshorne, M.D.
5. Medical Jurisprudence, including Toxicology, J. J. Reese, M.D.

—*Medical News and Library.*

Charity Hospital, New Orleans.—The following are the names of the new Medical Board for the Charity Hospital:—Surgeons—Drs. Stone, Hunt, Holliday, Beard, Choppin and Smith. Physicians—Drs. Jones, Cenas, Richardson, Nott, Tebault, Herrick, Drew, Shephard, Brickell, Crawcour, Fenner, Campbell, Hart, Semmes and Purviance. Edward M. Quirk is retained as Secretary of the Board of Administrators.

A new semi-monthly medical journal is about being started in New York, to take the place of the deceased *American Medical Times*, and under the charge of one of the editors of that journal. We are glad to make the announcement, and hope the new journal will meet with a better support than its predecessor. It will appear early in January.

Dr. Bennet Dowler, the former well-known Editor of the *New Orleans Medical and Surgical Journal*, proposes to commence a new series of that work early in the coming year, if sufficient patronage is promised. The work is to be bi-monthly, at $5 a year.

The *Savannah Journal of Medicine* is announced to appear in January—a bi-monthly of 72 pages, at $4 per annum. Also the *Medical and Surgical Monthly*, at Memphis, Tenn.; 64 pages each number, at $6 per annum.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, December 9th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week	36	34	70
Ave. mortality of corresponding weeks for ten years, 1853—1863	38.4	37.2	75.6
Average corrected to increased population	00	00	82.42
Death of persons above 90		1	1

Communications Received.—The Hypophosphites—Their Therapeutic Value.

Pamphlets Received.—Tenth Annual Report of the Trustees of the State Lunatic Hospital at Northamptom.

Died,—In Paris, October, 1865, of cerebral apoplexy, Prof. J. F. Malgaigne, one of the most eminent, learned and eloquent surgeons and teachers of the French capital.—In London, Nov. 2d, at the age of 66, John Lindley, M.D., F.R.S., Professor of Botany at University College, London.—In New Orleans, Sept. 8th, J. L. Riddle, M.D., Professor of Chemistry in the University of Louisiana.

Deaths in Boston for the week ending Saturday noon, December 9th, 70. Males, 36—Females 34. Accident, 3—apoplexy, 2—congestion of the brain, 2—disease of the brain, 1—bronchitis, 4—cancer, 1—cholera, 1—consumption, 9—convulsions, 2—croup, 5—diphtheria, 1—dropsy, 3—dropsy of the brain, 4—erysipelas, 1—scarlet fever, 2—typhoid fever, 4—hæmorrhage, 1—disease of the heart, 1—homicide, 2—infantile disease, 1—intemperance, 1—disease of the kidneys, 1—inflammation of the lungs, 5—marasmus, 2—measles, 1—old age, 1—parotitis, 1—pleurisy, 2—puerperal disease, 1—teething, 1—unknown, 3.

Under 5 years of age, 26—between 5 and 20 years, 10—between 20 and 40 years, 18—between 40 and 60 years, 8—above 60 years, 8. Born in the United States, 49—Ireland, 13—other places, 8.

THE

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THE HYPOPHOSPHITES—THEIR THERAPEUTIC VALUE.

[Communicated for the Boston Medical and Surgical Journal.]

BY IRA D. BROWN, M.D., RESIDENT PHYSICIAN AND SURGEON OF ALBANY CITY HOSPITAL.

IT must be confessed by all candid and reflecting physicians that the medical profession is exceedingly slow to learn new facts. Such is the reluctance to forsake old methods of practice, that many stumble heedlessly on through life without once getting out of the rut in which they started. With these, inflammation is still the *phlogiston* of the ancients, and a heated surface and bounding pulse the signal for depletion, antimony, calomel, jalap, &c., without regard to time, place or circumstances. Such men seldom learn anything—never make discoveries—never accomplish anything worthy of the noble profession in which they stand immovable as lamp-posts, bearing up only the light of others. On the other hand, there have always been men in the profession who are but too ready to experiment—who, having no stable theory of their own, eagerly embrace the last one that is presented. These are victims in turn of every new delusion; they are ever astride of some hobby, from which they fall only to mount another.

The first class named will always remain obstinate stumbling blocks in the path of scientific progress; truth must advance directly over them, if it advance at all. The second class are the fruitful parents of homœopathy, hydropathy, and kindred shams which at various periods have scourged the world and contributed greatly to bring the healing art into disgrace.

We have—thank Heaven!—a third class of physicians, never too old or too wise to learn, who are willing to give any theory a fair investigation—to accept whatever of truth may be found in it, and reject with keen discrimination that which stands upon untenable foundations. These are the *real*, the *true* physicians of the world, and worthy to stand by the bedside and minister to the ailments of suffering humanity. They are the men who make discoveries—who do not deem it labor lost to look through a bushel of the chaff of medical literature if they can separate from it one grain of truth—

who are willing to mine patiently for the diamond *fact*, though it be embedded never so deep in the clay of absurdity, speculation and folly.

When, less than ten years ago, Dr. J. Francis Churchill announced to the Imperial Academy of Paris that he had discovered a specific remedy for pulmonary phthisis, the first class of doctors I have referred to simply pronounced the statement absurd, and continued to stumble along in the old paths with which they were familiar. The second class (such of them as chanced at the time to be unhorsed from some of their previous hobbies) mounted Dr. Churchill's theory and well nigh rode it to death, carrying it to the most ridiculous extremes. The result has been, however, that some of the third class of quiet, thinking students of their profession, having applied the tests of judgment and experience to the subject, have found a new and important agent in the materia medica, which, if not equal to all the sanguine anticipations of Dr. Churchill, is still of permanent therapeutic value.

As is well known to those who have read the work of Dr. Churchill, which must ever remain a lasting monument of the enthusiastic research of that physician, the remedies on which he mainly relies are the hypophosphite salts resulting from a union of hypophosphorous acid with a salifiable base. Dr. Churchill's investigations led him to the conclusion that the tubercular diathesis depended upon a deficiency of oxidizable phosphorus in the system, and that the appropriate remedy would be the exhibition of phosphorus in a form capable of oxidation and assimilation. That phosphorus exists in large proportion in the animal economy has long been known, and the additional fact that it is found free in the brain is a demonstration of modern chemical investigation. It cannot be doubted by any intelligent mind that the phosphorus present in the body performs *some* important office, for nature does not distribute the elements without an object. In an article published in *The Boston Medical and Surgical Journal*, in May, 1858, Dr. Nichols, the well-known chemist, remarks:—"The vital importance of these agents (the hypophosphites) in maintaining a normal condition of the system can be understood by a consideration of the probable fact that in all the operations of the mind, in every effort requiring an expenditure of nervous force, they are called into action. In their rapid oxidation in the brain, on occasions of great intellectual effort, there may be a nearer approximation to literal truth in the remark that there are 'thoughts that burn,' than is generally supposed." This observation is supported by the fact that students and others who are performing a large amount of brain labor excrete an unusual amount of phosphates in the urine, a circumstance I have had the curiosity to test repeatedly. It has been asserted—I know not with what truth—that there is an almost total want of phosphorus in the brains of idiots. If chemical science should succeed in demonstrat-

ing this circumstance, it would add another convincing proof of the importance of this element as a generator of nervous power, and might afford a useful hint for the treatment of insanity and other mental aberrations.

It may be assumed, without any stretch of rational conclusion, that if oxidizable phosphorus exists in the brain, blood and tissues of the animal body in its normal condition, its absence or diminution must create variations from the healthy standard—in a word, *disease*. It thence irresistibly follows that the remedy consists in supplying the deficient element in a condition both assimilable and oxidizable. There is no dispute among chemists or physiologists as to the fact that the hypophosphite salts offer the most direct and philosophical means of supplying phosphorus to the system. The small amount of oxygen in combination renders them easily decomposable in the ecomomy. In the language of Dr. Nichols, "what phosphoric acid may have failed to do in supplying the waste of phosphorus, it is almost certain that the acid containing the less amount of oxygen is capable of accomplishing." The principal theory, then, for the administration of the hypophosphites rests upon these three foundations:—

1. That phosphorus is an essential element of the animal economy.
2. That its undue waste by excretion, or otherwise, is a cause of disease.
3. That the natural remedy is phosphorus in an oxidizable and assimilable form.

That the hypophosphites possess alterative and tonic properties cannot be doubted by any person who has witnessed the sometimes surprising effects following their administration. Dr. Newton says of them, in the *Chemical Gazette*, "they seem to possess the power of increasing nerve force and promoting the function of nutrition." Another effect which has often been noticed by those who are familiar with their administration is the apparently anodyne influence exerted in cases of morbid vigilance and restlessness. Although the patient may have been disturbed and wakeful, no sooner does he commence taking the hypophosphites than he sleeps soundly at night. They produce no headache, constipation, or other unpleasant symptom, and the patient does not ordinarily become accustomed to them so as to require an increase of dose. The anodyne effect is probably incidental, and follows from the tonic impression upon the digestive apparatus, as it is well known that judicious physical exercise, or anything that improves the assimilation of the food, produces sleep in the same way.

While it yet remains to be proved that any remedy is capable of curing a well-marked case of phthisis that has advanced to the second stage, there can be no reasonable doubt that the hypophosphites, beyond any other remedy that we possess, will prolong the life of the patient. Dr. Wood believes that consumption is occa-

sionally curable. That the disease depends chiefly upon defective nutrition is almost universally admitted, and if any medicine is capable of remedying the imperfect assimilation of the food the hypophosphites will accomplish it, for therein seems to lie their peculiar power. I have seen one case where the patient was much reduced in flesh and strength, with night-sweats and a racking cough, apparently dependent upon tubercular deposit in the left lung, which resulted favorably. Under the use of the hypophosphites, the patient gained strength daily, the night sweats ceased, appetite returned, and he got rapidly well. I saw the patient again twelve months afterwards, and he appeared to be enjoying very tolerable health, without any signs of the disease which had threatened to put a speedy end to his existence. In the first, or forming stage of phthisis, the hypophosphites may be given with every hope of a favorable result.

But if Dr. Churchill did not discover a remedy for tuberculosis, he certainly did bring before the medical world a class of medicines that are of the greatest value in the numerous diseases resulting from loss of nerve power; also in many of the diseases of infancy connected with the scrofulous diathesis, and those where the osseous system is defective. In all these cases I have seen them administered with the most beneficial results, and will here mention two or three cases as illustrations.

Mrs. N., 34 years of age, married, of delicate nervous organization; had suffered much from dysmenorrhœa; never had children. Patient when she came under my notice was considerably emaciated; countenance pale; pulse weak and considerably accelerated; much troubled with cold hands and feet; appetite capricious, but generally poor; frequent pain and sickness at stomach after meals; has some cough; is dejected and gloomy in spirits; had taken elixir of bark and iron, quinine, cod-liver oil and various other tonics, with very little benefit. Prescribed the following:—℞. Hypophosphite lime, hypophosphite soda, āā ʒ ij.; water, Oi. A tablespoonful to be taken thrice daily. Without other treatment the patient rapidly recovered her health and spirits; appetite became excellent; digestion good; gained several pounds in weight, and after taking the hypophosphites six weeks was to all appearance perfectly well.

Mrs. H., aged 29, had enjoyed very good health until after the birth of her second child, after which she suffered for a year with indigestion, and the long train of nervous symptoms so often witnessed by practitioners that they scarcely need description. She became a prey to the most dismal fancies and gloomy forebodings; passed whole nights without sleep, often in paroxysms of mental anguish distressing to witness. Opiates seemed only to increase the sleeplessness of the patient. She was treated in turn by two medical gentlemen, who exhausted the whole catalogue of tonics and antispasmodics without giving any relief. When I saw the patient,

in addition to the symptoms above detailed, there was much tenderness perceptible upon pressing the fingers on the upper part of the cervical vertebræ. She was ordered to take ten grains of the hypophosphite of lime three times a day. No other treatment was had, with the exception that the patient was directed at first to take a dose of ammoniated tincture of valerian at bedtime, which was soon discontinued. Improvement was noticed almost immediately. On the second night her sleep was undisturbed. After continuing the medicine nearly two months, she appeared perfectly well; appetite and digestion good, sleep sound and refreshing. She assured me that she could never be sufficiently grateful for recovery from a condition she said was "worse than death."

I have only time and space to give one more case, which was that of a boy three years of age, suffering from marasmus. The little patient was much emaciated, his abdomen was distended, he had a diarrhœa, which his mother said had continued with occasional intermissions for nearly two years, sometimes accompanied with bloody discharges. Under the administration of the hypophosphites taken in milk, two grains twice a day, his recovery, apparently permanent, took place in a few weeks. I have known a somewhat similar case recover under the use of the syrup of the pyrophosphate of iron, and will not stop now to consider whether the iron or phosphorus, or both, cured the patient.

Without protracting the discussion further, have I not said enough to warrant the conclusion that the hypophosphites are worthy a more prominent place than the appendix to the United States Dispensatory? In the class of diseases to which they seem so well adapted, I believe they will disappoint the practitioner in fewer instances than more pretentious remedies that come to us labelled *officinal*.

It may be proper to add, by way of caution to those who may desire to make a trial of the hypophosphites, that some of these salts in the market I have found nearly worthless, they doubtless being improperly prepared. It is of the utmost importance that they should be pure, containing the proper proportion of hypophosphoric acid, and it will be well to see that they come from the laboratory of some reliable chemist.

Albany, N. Y., December, 1865.

CLINICAL LECTURES ON AMBLYOPIA AND AMAUROSIS, BY PROF. A. von GRAEFE.

[Continued from page 400.]

CASE II.—*Progressive Amaurosis, depending on Atrophy of the Optic Nerves.*

Julius M., a sailor, æt. 24, of tolerably robust appearance and a healthy complexion, presents himself on account of a considerable

impairment of vision, rendering it already difficult for him to find his way about. According to his own account, the left eye became affected six months, the right four months ago, and in both the rate of progression has been tolerably equal. At present the acuteness of central vision amounts to about $\frac{1}{100}$ on the left side, $\frac{1}{30}$ on the right; it should be stated, however, that in the left eye the acuteness of vision in the direction upwards and outwards is not only relatively but absolutely greater than in that of fixation, so that while fingers are with difficulty counted at a distance of nine inches when held directly before the patient, they are made out in two feet if held at an angle of 20° from the point of fixation. This agrees entirely with the following state of the field of vision. In the left eye the entire inner half is wanting, and a hand held up in good daylight is nowhere visible on the farther side of the vertical line of equal division. In the outer and lower quadrant, too, eccentric vision is extremely imperfect, and becomes entirely defective by reduced lamplight. It is only relatively good in the outer and upper quadrant, and is here in one direction more pronounced than in central vision, as is seen in the tendency to eccentric fixation. A better functional state is found in the right eye. The loss in the field of vision, proceeding here, too, from the inner edge, does not extend to the vertical line of equal division, but remains in the plane of vision about 15° from the point of fixation. Below the plane of vision, indeed, it approaches nearer this vertical line, while above it recedes from it. A considerable failure of distinctness in the eccentric vision extends, however, far beyond these limits, it being impossible to count fingers in the immediate vicinity of the nasal side of the point of fixation. In accordance with this, the defective region nearly grazes the point of fixation, by diminished lamplight. In the outer half of the field the eccentric acuteness of vision is relatively, although here not absolutely, better than the central. The considerable loss of perception, and especially the contraction of the field of vision, is manifested in the unsteady, tentative gait of the patient. As the light wanes, he becomes entirely helpless, owing to the above-mentioned torpidity of the retina, existing, as it does, within a large portion of the already contracted field of vision.

With the exception of the sluggish pupillary reaction, especially marked on the left side, nothing abnormal is externally visible. The ophthalmoscope reveals a normal state of the refractive media and internal membranes, and in each eye a high degree of atrophic degeneration of the papilla, under the form of atrophic excavation. The elements of the lamina cribrosa are plainly visible in the larger and excavated portion of the papilla, on the temporal side up to the edge. The remaining substance of the papilla, namely, inwards from the vessels, is of an opaque whiteness; the smaller vessels are wanting; those of medium size are somewhat, the larger, on the other hand, hardly at all contracted.

An examination of the case shows that, at the commencement of the change in his vision, the patient suffered from slight frontal headache, increased by stooping and coupled with a sense of confusion; that for several months, however, these, at the best but slightly pronounced symptoms, have entirely disappeared. At present no trace of disease is to be found in either any organ or in the physical or mental functions. He labors, naturally, at present under some mental depression; no more, however, than might reasonably be attributed to the daily failure in his vision. Nothing of consequence can be ascertained from his previous habits of life, except a not immoderately excessive use of tobacco, which, however, he gave up at the first commencement of the trouble.

The prognosis of this case is altogether a gloomy one. The contraction of the field of vision has taken place in that ominous manner which characterizes *progressive atrophy:* slowly advancing limitation from the inner edge, first on the left side, then symmetrically on the right, besides enormous loss of sight, which has caused on the left side an absolute, and on the right a relative preponderance of eccentric over central vision.

Before, however, giving up all hope, it is our duty to think over all the possible relatively favorable chances, if necessary to exclude them. May we not, perhaps, have to do with one of those cases (already referred to) of contraction of the field of vision resulting from hemiopia, and in which recovery is possible? Unfortunately, our reply must be in the negative; for in the first place the affection has extended on the left side far beyond the vertical line of equal division; in the second, the acuteness of vision at the point of fixation has become, even on the right side, too much affected; in the third, the defective portion of the field is not sharply set apart from the parts that retain their normal function, but is bounded by extensive portions, the acuteness of vision of which is reduced and the torpor typical; fourthly, the development, although more rapid than in the average of cases of progressive atrophy, cannot properly be called acute, i. e., reaching its height in a few weeks; fifthly, we have to do with limitations of the inner portion of the field on each side, whereas such curable or stationary cases have thus far been observed to take the form of hemiopia either temporal or occurring on corresponding sides (very seldom that of defective portions extending upwards or downwards). May not this, we ask again, be perhaps the result of an action already terminated or capable of being arrested, and may it not on this theory be possible to keep what vision exists at present or save an appreciable portion? Neither the course of the disease nor the attendant symptoms support this view. In the case of rapidly-developed amaurotic disorders, accompanied by well-marked cerebral symptoms, the subsidence of which leaves the affection stationary, we have a more favorable foundation to build upon; such is, however, not here the case, the vague indica-

tions of cerebral disturbance which previously existed have passed away without making the least impression on the continued development of the amaurosis. In this point of view, its steady increase is discouraging. The less the connection that can be made out with ulterior cerebral symptoms that possibly admit of relief, the more the atrophy of the optic nerve plays the part, so to speak, of an independent disease, the more desperate is the prognosis. It is, however, made less certain by the discovery of some particular habit or way of life of the patient that is manifestly productive of mischief, if we have reason to trust that the removal of this may affect the progress of the disease. But even under these circumstances let no illusory hopes be indulged in. Has the amaurotic affection passed into the stage of advanced contraction of the field of vision, and has besides marked degeneration of the papilla taken place, the secondary disease may be known to have attained a fatal independence of its cause. But no fact favorable to our case can be made out in this connection. The only suspicious habit, the undue use of tobacco, had been relinquished at the commencement of the disease.

Even in the worst cases of progressive atrophy, it may exceptionally happen that an unexpected pause occurs, after the acuteness of vision has appreciably diminished. I saw, for example, within a few days a patient who had been treated by me for spinal amaurosis eight years before. Vision had at that time become extinct in one eye, and within a year the other had lost so much as to be only able to follow the movements of a hand held on the temporal side. By referring to the notes I took at the time, I have recently ascertained that this state of the vision, poor as it was, had remained unaltered during the space of eight years. Such decided pauses are, however, most exceptional, and I have hardly observed them except in cases where vision had been reduced to its lowest ebb, where, indeed, in the popular sense, blindness might be said to have already commenced. They are to be distinguished from the temporary pauses which last some weeks, rarely from four to six months. These latter happen very frequently, and in the most varied forms of progressive amblyopia, especially those dependent on spinal disease. But in our case the advanced atrophic degeneration of the papilla, with the continuous loss in the field of vision and the failure of all other symptoms, offer no foundation for these hopes. And although we are withheld by the variable and obscure nature of these affections from expressing with too absolute certainty an opinion unfavorable to the possible preservation of a very slight amount of vision, perhaps quantitative perception of light, it is still most probable that within a few months, perhaps a little longer, the patient will become the prey of absolute blindness.

As regards the nature of the disease, it is, in fact, impossible for us to make any other diagnosis than that of *progressive atrophy of the optic nerves*. At present, no symptoms of any other morbid

change are to be found. The paroxysms of headache the patient had at the commencement of the disease, and which in an entirely analogous manner are met with in many amaurotic conditions, do not in my opinion afford special indications of an existing irritation in the substance of the brain or in its membranes. I am inclined to explain many such headaches on the ground of the disordered functions of the eyes themselves. When patients begin to lose their vision, and yet concentrate all their faculties on the appreciation of their visual impressions in order to follow their avocations or guide themselves about, there result derangements of sensibility similar to those occurring in diplopia, seeing in circles of dispersion, &c. In such cases we observe that the headache disappears as soon as the patient intermits his efforts to see. If, however, in the face of this, the atrophy or its cause progresses, we have no longer a right to directly connect the headache with the cause alluded to. This, of course, applies only to certain forms of headache, and the true state of the matter must be decided by a review of the whole case, especially by trying the effect of entire darkness. In the present instance we had nothing on which to base our researches, inasmuch as the headache had already disappeared.

That a headache, caused in the first instance by attempts to see, should be increased by stooping, or anything inducing congestion, is of course not surprising. I am willing, too, to grant that the headache itself may be regarded as congestive, so far as the efforts at vision are propagated along the vaso-motory nerves, as may be best seen in the conjunctival vessels. I merely wish to call attention to this point, that the accompanying headache is not always connected with the cause of the amaurotic affection, but may directly depend on the derangement of vision. In other cases of atrophy paroxysms of pain occur, unconnected with the act of vision and evidently attributable to the cause of the malady. Here, too, it remains an open question as to its original inflammatory nature, inasmuch as it seems that the source of such paroxysms may be found as well in genuine atrophy of isolated segments of the brain as in the so nearly-allied gray degeneration of the spinal cord. Finally, I am not disposed to deny that in cases of amaurosis complicated with chronic meningitis, there may occur pains characterized as inflammatory by the sensibility of the head to the touch, a strongly-marked confusion of the faculties—also by the duration and course of the attacks; but I do not regard such a state of things as either regular or frequent in progressive atrophy of the optic nerves.

In the case of this patient there exist at present no symptoms of paralysis of body or mind, and this fact renders it our duty not to venture beyond the diagnosis of atrophy of the optic nerve. But will it be so in the future? It is exceedingly possible that in the course of years mental alienation may become developed, or some further affection of the general system of a paralytic nature. Though, however, this sequence is not infrequently observed, it is still the fact that more than half the cases of amaurosis do not advance beyond the narrow limits of the special affection, and that when death occurs after a lapse of years, an examination reveals either atrophy of the optic nerves or partial atrophy of the portions of the brain connected with them.

As to anything additional on the score of treatment, it is simply necessary to state that all powerful derivative agents, cathartics, setons, mercurials, diaphoretics and depletives, beneficial as they may be in cases of congestive amblyopia (Case I.), are here decidedly injurious. The more we distinguish the different forms the more will this conviction force itself upon us. Everything that suddenly depresses the strength or excites the circulatory system is to be most carefully avoided. We must, however, cease to act on these principles when an investigation of the case causes us to arrive at opposite conclusions, by demonstrating, for example, the existence of chronic meningitis or the suppression of habitual secretions; but even then (considering the state of paralysis that exists) care must be taken that the remedies employed, such as leeches behind the ears, setons and sublimate, be so administered as not to cause sudden depression of the powers. In the average of cases of progressive atrophy, the best means of retarding its progress consists in a mild tonic course—small doses of iron, salt and tonic baths, milk and whey diet; in other words, a nutritious but not stimulating diet, good air, a moderate course of cold bathing and a carefully-regulated amount of light.

In general, a case like the present may be regarded as a *noli me tangere.* We have a right to look upon it with the same dread with which the physicians of other days approached an amaurosis. An inevitable experience it is, indeed, to the ophthalmic surgeon to find such patients leaving their homes and undertaking long journeys in the hope of finding succor; returning, as they certainly must, having accomplished nothing, and often much blinder than before. Such an event has a very depressing effect on the spirits of the patients, not only because their hopes have failed of fruition, but also because gradual loss of vision is relatively more endurable under the circumstances and exposed to the influences of every-day life.

Case III.—*Central Scotoma, with partial Atrophy of the Optic Nerve, admitting only of gradual and partial Improvement.*

Alexander K., aged 20, a coachman, and of tolerably robust appearance, comes to us on account of impaired vision of the left eye, coming on, as he states, five months ago, and taking but a few weeks to attain its present development. The right eye, too, sees but imperfectly; this, however, he says has always been the case.

The functional examination reveals, first, an entirely normal condition of the boundaries of each field of vision; the acuteness of vision, however, is reduced in the left eye to $\frac{1}{30}$, in the right to about $\frac{1}{20}$, owing to the presence of central scotomas, which subtend an arc of from 8° to 10° in the centre of the field. By ordinary light the patient finds it difficult to define these scotomas; by a moderate amount of artificial light, however, he is abundantly able, and it becomes manifest that the amount of vision just referred to is eccentric, inasmuch as within the limits of the central scotoma the patient has but a quantitative perception of light. In making the ophthal-

moscopic examination, it is found that a small image of the flame, reflected by means of a plane mirror on the region of the fovea centralis, awakens but a feeble impression. The scotomas are surrounded by a ring-shaped zone where vision is defective, broader on the inner than on the temporal side.

We hence arrive at the conclusion that the affection of the right eye is by no means congenital, but a matter of recent development, probably simultaneous with that of the left. It is possible that the patient did not notice its coming on, from the fact of this eye being excluded from the act of common vision through a slight divergent strabismus. For amblyopia resulting from exclusion never assumes the shape of central scotoma. In the lighter forms it is characterized by an equal loss of sensitiveness (diminution of central and eccentric vision, especially the former); in the more serious cases, those occurring with persistent strabismus, by a predominance of the inner over the outer portion of the retina.

The ophthalmoscope reveals an entirely normal state of the refractive media and membranes, a physiological excavation (extending here but a short distance outwards from the point of emergence of the vessels); over and above this, however, an undeniably whitish coloration of the papilla, caused by disappearance of the smaller vessels and a small loss of transparency in the tissue, a slight degree, therefore, of atrophic degeneration. Nothing was obtained from a general physical examination. Shortly after this difficulty commenced, the patient had attacks of dizziness and headache, recurring sometimes and lasting even several days; entirely disappearing, however, during the last few months.

An entirely favorable *prognosis*, as far as regards the danger of ultimate blindness, may here be given. As has already been stated, central scotoma, coupled with a field of vision the limits of which are entirely normal, never indicates progressive atrophy. If the disease is in its incipient stage, it is well not to lay too much stress on this fact; not so, however, in a case like the present, where the form is well marked and the affection has culminated. Deterioration, too, is not to be feared. Central scotomas either occur very suddenly, or else they become developed in a few weeks simultaneously or successively in both eyes, increasing outwards from their own centres (not always proceeding straight from the point of fixation); or finally, cases of amblyopia of more prolonged duration, and in which no interruption of the field of vision had been observed, develope at a later period signs of central scotoma after such a manner that while, as a rule, the existing central acuteness of vision is retained, the eccentric improves up to a certain point. We may assume, in all these cases of central scotoma, that where the same state of things has persisted for several months a change for the worse is improbable. The undeniable change in color of the papilla, which is yet to be discussed, by no means necessarily denotes a

danger of progressive atrophy (see above). Is the prognosis, then, favorable as regards a worse condition of things, or blindness, the same is not the case as relates to recovery. If central scotomas have lasted beyond a few weeks, and visible degeneration of the papilla has taken place, an expectation of complete recovery is no longer to be indulged in. In general, a slow improvement takes place, sometimes hardly perceptible and always imperfect, the blank caused by the scotoma becoming smaller, and the surrounding ring-shaped zone, where vision was imperfect, gaining in power, while practice gives eccentric vision a more than normal amount of acuteness. It sometimes happens, too, that in the middle of the central scotoma itself a patch clears away, thus allowing of a satisfactory amount of central vision. (This last event, however, occurs much less frequently than in certain cases of central scotoma resulting from circumscribed choroido-retinitis, well known to all.) Particularly important in making up the prognosis is a knowledge of the fact whether vision is relatively most acute centrally, within the scotoma itself, or in an adjoining region. In the case of a scotoma, the angle of aperture of which is 20°, and where vision of $\frac{1}{10}$ corresponds with the point of fixation—the patient "seeing through the spot"—the prognosis as regards recovery is much better than where a scotoma with a small angle of aperture coëxists with vision [1] which is eccentric, i. e., is situated in a region adjoining the scotoma. It is easy to understand that a disease interrupting the transmission of impressions must be much more grave when it brings about a loss of central vision. It has already been stated that this is the condition of things in the present case, and this circumstance, in connection with the fact that the disease has for some time remained at nearly the same level, and degeneration of the papilla has taken place, leads us to infer that at the utmost there may result an almost imperceptible improvement in the first sense alluded to. Whether our patient will, in the course of time, be again in a condition to read ordinary type is a matter of uncertainty.

It is particularly difficult here to enter more minutely into the question of diagnosis. Pathological anatomy has as yet furnished us with no data in such cases of central scotoma, and clinical observation gives us but little theoretical instruction. The fact that both eyes are affected, while other symptoms of central disturbance are wanting, has caused preference to be given to the theory of the existence of some morbid process in the chiasma nervorum opticorum; such an hypothesis, however, I think rests here on slight grounds. Were some material cause, such as apoplexy or impairment of substance, located in the chiasma, the symmetrical character of the affection would seem to me entirely incomprehensible. It appears to me much more probable that a defined cause of the disease holds sway at the cerebral extremity of the optic nerves, and that these regions feel the influence of that symmetrical tendency that governs

twin organs of sense, and is often so strikingly shown in the external portions of the eye. But to what particular derangement can we bring the affair home? The instantaneous occurrence of scotomas has caused them to be attributed to hæmorrhagic causes. Against this may be set the limited extent of the affection, as well as its more gradual development in otherwise analogous cases. Moreover, this state of things is never found in connection with other hæmorrhagic diseases of the brain, and is ascertained to relatively occur with most frequency in young patients, with whom the principal predisposing causes of cerebral hæmorrhage are absent. It is not impossible that we have to do with anomalies of another kind in the circulation, with a stimulation affecting certain points of the vaso-motory nervous chain, or, in general, with a functional (molecular?) interruption of the transmission of impressions, the first approach of which we are unable to trace to any palpable material cause. The subsequent degeneration of the papilla is consistent with this theory, inasmuch as it is to be regarded as probably consecutive. If we suppose the disease to have proceeded from causes of a vaso-motory nature, its symmetrical occurrence at the inner end of each optic nerve would admit of ready explanation. It would thus, too, be rendered comprehensible why central scotomas should sometimes form after an exhausting disease of the entire system, with other signs of vaso-motory disturbance; or after mental affections, with absence of cutaneous sensibility.

The foundation of our diagnosis being thus uncertain, our choice of remedies must be based principally on the state of the constitution, as also on the causes and accompaniments of the disease. If the affection is recent, or if there are symptoms of cerebral congestion, it would be well to try the effect of a few local bloodlettings, by applying leeches behind the ears or the Heurteloup to the temple. Where hæmorrhoidal or catamenial complications are suspected, they of course deserve consideration. If symptoms of mental derangement manifest themselves in connection with the disease, or if cutaneous sensibility becomes impaired, a course of zinc or nitrate of silver should be prescribed. If the skin fulfils its functions irregularly, the effect of a powerful diaphoretic—a Roman bath, for example—should be tried, if no contra-indications exist. If, on the other hand, central scotoma has been developed in the course of a prostrating disease, a tonic course is indicated—small doses of iron, warm baths, nourishing food, residence in the country, &c. We cannot boast of having found any special course of treatment indicated in the case of our patient. His previous attacks of giddiness and headache admit the supposition of congestive antecedents, although susceptible of other explanations.

The patient was shown again two months later. Several local abstractions of blood had meanwhile been made, and a diaphoretic course carried out. The improvement noticed consisted in an in-

creased energy of the indistinct region surrounding the scotoma, without any particular change in the scotoma itself. In consequence of this the acuteness of vision (still eccentric) had increased to $\frac{1}{1}$ on one side and $\frac{1}{16}$ on the other. The patient was now to commence systematic practice of the eyes. For such cases prove that the standard of eccentric vision is set by the amount of its employment, and that the capacity of that portion of the retina adjacent to its centre is capable of being developed beyond the normal bounds. Without ever attaining the normal acuteness of the retinal centre, eccentric vision may double and treble itself in cases of central interruption. This development may be partially instinctive, brought about by the use of the eyes, and partially promoted by systematic practice. We give patients, the acuteness of whose vision is insufficient, ordinary type to read, and then generally magnifying glasses of unusual construction, and based, I think, on a sound principle. Two convex glasses—in this case $+\frac{1}{4}$ and $+\frac{1}{6}$ were selected—are placed an inch apart in a short metallic tube, and the whole furnished with an appropriate handle. We thus secure a considerable amount of magnifying power in connection with less spherical aberration, and a removal to a better distance from the eye than in the case of ordinary convex glasses. I need not add that this system of practice should be restricted at first to a very short time, perhaps two minutes, and to a size of type not barely recognizable, but seen with some degree of readiness.

[To be continued.]

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

Nov. 27th.—*Death from Hœmorrhage three weeks after Confinement.*—Dr. H. J. Bigelow reported the following case :—

A lady, 30 years old, who had always been healthy, was confined for the third time three weeks ago. Her labors had always been very easy and rapid. She did well for one week, and then was attacked with pain in the right side ; two days afterwards there was a moderate effusion into the pleura. She improved daily, and on the 25th the fluid was almost wholly absorbed. She nursed her child but once or twice daily, the infant having also a wet-nurse. Although anxious to be up, this was not allowed, but she sat up in bed all day yesterday. In the evening, between 5 and 6 o'clock, she remarked that she had not felt so well for some time. Soon afterwards, having occasion to get out of bed, on getting into bed again she became faint. Dr. Bigelow was sent for, but not being at home, Dr. Coolidge came in his stead. Stimulants were given, and the patient revived. Dr. C. remained with her for half an hour, and left her quite comfortable. Dr. Bigelow arrived soon afterwards, and found her still faint. The

pulse was small, the hands cold, the forehead cool, the feet warm, and the patient had vomited twice. She was quite conscious, and complained of no single sensation, except a little griping in the abdomen, for which forty drops of McMunn's elixir of opium were given by injection, and afterwards twenty more by the mouth. There was no pain, no sensation of coldness and no lividity. Stimulants of various kinds were freely given, and bottles of hot water were placed around the patient. She continued to vomit occasionally, and the pulse grew weaker and weaker. The intellect remained perfect, and she asked if she were dying. Soon after eight o'clock she began to sigh, and at half past eight she ceased to breathe. The pulse continued to beat feebly for fifteen minutes after apparent death.

There was no autopsy.

Dr. Bigelow believed the death to have been caused by hæmorrhage into the cavity of the uterus, which did not escape externally.

Dr. Gould had lately had a somewhat similar case. A young lady, 30 years old, who had never before been sick, was seized with headache on the morning of Nov. 12th, and remained in bed all day. At noon the headache left her, but she was attacked with severe pain beneath the sternum. There was also much tenderness on pressure at that part. The respiration was rapid, the inspiration being jerking. Stimulants were applied externally, and an opiate was given. The next day the patient declared that she felt quite well, though weak and nervous. No physical signs were detected in the chest. There was no particular change till Thursday, the 16th. At the visit of that day, at noon, Dr. G. was told that the patient had passed a good night, and had been sleeping quietly most of the forenoon. The patient made the same statement, and said she hoped to enjoy still more rest. No apprehension existed on the part of either parents or patient. On examination, she was found to be in a state of collapse, icy cold, and pulseless, except at the carotids. It was thought possible, at first, that this condition might be owing to Dover's powder, ten grains of which she had taken of her own accord towards morning. She had no pain nor headache, and complained only of a sense of fatigue. Some brandy was given, after which the patient began to vomit with great violence, as in cholera, and had hiccough. The veins of the neck were largely distended. Only a single feeble sound of the heart could be detected by auscultation. There was neither dyspnœa nor orthopnœa, nor choice of position; but general coldness. She was quite lucid, calm and cheerful, and expressed surprise at the alarm of her friends, assuring them that she could be in no danger. Stimulants of all kinds were employed, externally and internally, but there was no change in the pulse or in any of the symptoms till four o'clock the next morning, when she quietly died.

No autopsy was allowed.

Dr. Gould was at a loss to account for the symptoms and death: but asked whether the original attack could possibly have been endocarditis, which might have resulted in softening or rupture of some part of the heart, or the formation of coagula within its cavities?

Dec. 11th.—*Pyelitis.*—Dr. Borland showed the bladder and kidneys of a man who died in the City Hospital, and gave the following account of the case:—The patient was a single man, 48 years old, whose occupation was that of a mover of buildings. He entered the

Hospital on the 28th day of November. He had a marked angular curvature of the spine, at the lower dorsal and upper lumbar vertebræ. He served two years in the army, when the curvature increased somewhat. He had some slight pains which he considered to be rheumatic; they were confined to the lower half of the body, below the curvature.

Six months before entrance, he noticed a loss of power in micturition, and dribbling. For three months he noticed his urine to be somewhat bloody; — for the last three months he has seen no blood, but always some pus at the end of micturition. Since the commencement of the renal trouble he has progressive emaciation of the legs; weakness and inclination to trip from dragging of the toes; no formication. He was able, however, to do light work up to one month before entrance.

The day before he was admitted he had a chill, with partial suppression of urine. At entrance he complained of dizziness and dull frontal headache. He had light tenderness over the pubes, and but slight pain on deep pressure in the region of the curvature. No pain that could be attributed to the kidneys. His pulse was 88, and he was inclined to constipation. His chief source of trouble was a slight feeling of tenesmus about the rectum and bladder, which was readily relieved by two grains of opium, given in suppository. He was ordered the infusion of buchu.

Dec. 7th, the patient continued in the same condition, with the exception of some epigastric pain and vomiting. The amount of urine passed, both by voluntary effort and by catheterism, was not more than 14 ounces in 24 hours. The passage of the catheter produced little or no pain.

Vomiting continued to be urgent for four days, in spite of the use of oxalate of cerium, dilute hydrocyanic acid, and sinapisms to the epigastrium. Dec. 6th, on passing the catheter little or no urine could be obtained, but 5 or 6 ounces of pure pus. The bladder was washed out by the use of the double catheter. On Dec. 7th, the patient was moribund; pulse 44, respirations 10; and at noon he died.

The autopsy was made by Dr. Chas. W. Swan, Pathologist to the Hospital. His attention had not been drawn to the fact of the curvature of the spine, and nothing in the autopsy pointing particularly to it, it escaped his notice.

The pelvis of the left kidney was converted into an abscess, containing about an ounce of yellowish, slightly offensive pus. Several culs-de-sacs extended into the substance of the cones, displacing some of them almost entirely. The lining membrane of the cavity was thick, white and opaque, and in places somewhat livid. Pus flowed freely through the ureter into the bladder. The pelvis of the right kidney was healthy. Both kidneys were indurated, their surfaces puckered and mottled with yellowish clay-color. By the microscope, healthy tubuli and epithelium were found, but mixed with these was much isolated, imperfect epithelium, with distinct outlines, whose nuclei in many cases were converted into spherical, compact masses of granules, which latter were also found free. Some of the free cell-elements were oval, or almost fusiform, reminding one slightly of the fibro-plastic elements, but still apparently only altered epithelium.

The bladder was contracted, thickened, and apparently wanting in mucous membrane. Its internal surface was greenish-black, and its contents quite offensive.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, DECEMBER 21, 1865.

Cholera—Is it Transmissible?—Every physician must feel the importance of this question, particularly at a time when the authorities of every port along our wide seaboard are called upon to take decided action in the matter of quarantine, and naturally look to our profession for advice. Unfortunately, it is a question concerning which opinions widely differ. The majority of physicians in New England, perhaps, believe that it is not contagious, but mostly, so far as we know, on evidence of a negative character. Dr. Snow, the Superintendent of Health in Providence, in a recent tract for the people, says that it would be a "work of supererogation" to attempt to prove that it is not contagious, and that no person of intelligence can believe otherwise. The evidence he offers is also wholly of a negative character. As may be supposed, he considers quarantine wholly unnecessary, and assumes that the medical faculty of Paris have the same faith. With no evidence of our own to offer, we shall again present to our readers the views of those who have had fresh opportunity of observation, and it will be seen how strong is the belief which prevails among those who are now witnesses of its ravages in its contagious nature. Indeed, not a dissenting voice is raised to such opinions as these which follow in the discussions at the medical societies, which fill the pages of foreign journals.

At the session of the Académie des Sciences, Nov. 6th, M. Velpeau read a paper of some length on the subject of the cure of cholera. He believes the disease is contagious, and states "that all observations made upon the appearance of cholera in those places where it is not epidemic—for example, in Western Europe—seem to me to prove, almost to a certainty, that cholera is contagious."

The following extract is translated from the *Archives Générales* of November. It is a portion of a memoir presented to the Académie de Médecine by M. Jules Worms, Médecin en chef de l'hopital militaire du Gros-caillou.

"There is a special agent produced upon the banks of the Ganges, and under circumstances but little understood, which is poisonous to many persons.

"This agent manifests itself among persons living or travelling together, but always presents an uninterrupted chain.

"The cholera is a disease transmissible by men.

"This agent manifests its influence upon certain individuals of the human species (probably, also, upon certain kinds of animals) by effects more or less grave.

"The proportion of persons who are affected by this agent can only be approximately estimated, and is always very small. The human organization may become a fertile soil for the multiplication of this agent, as soon as it shows its poisonous effects.

"The multiplication of this agent takes place particularly in the digestive canal.

"The alvine and gastric discharges of patients affected with cholera contain the effective agent in transmission.

"This efficacy does not coincide with the escape of the discharges. It is subsequent to them by several days.

"It appears to be destroyed after a space of from fifteen days to three weeks.

"The corpses of cholera patients emit the poisonous agent in a much higher degree than the sick.

"Persons affected only with cholerine emit with their dejections an agent capable of producing true cholera about them.

"The greater or less density of the sun's rays to which these dejections are exposed diminishes or favors the propagation of the disease.

"The circumstances which, besides the individual receptivity, the conditions of which are entirely unknown, favor the effectual reception of the toxical agent, are the gastro-intestinal affections, depressing affections of the nervous system, errors of diet, excesses, and all things which diminish the organic energy necessary for the elimination of the poisonous agent.

"Its energy is in proportion to its concentration, and this to the importance of the foci.

"The radius of effectual action of this agent is very limited. Its diffusion in the atmosphere diminishes and annuls its effects.

"The practical indications which flow from these conclusions are as follows:—

"The establishment of certain measures with regard to healthy persons and objects coming from infected places.

"The state of science ought to convince us that healthy persons and objects which have not been used by the sick are little adapted to bear the poisonous agent. This, to be efficacious, must be produced in quantity (as this only happens among the sick, and is fixed upon objects which have received their dejections).

"Very rigid measures with regard to sick persons arriving from an infected country, by isolating the sick and by the disinfection or destruction of their dejections, the disinfection of places occupied by them. These measures applied with care in other countries have produced unlooked-for results.

"Well-regulated sanitary inspection. An appeal to all the physicians of the country to announce to the authorities the first cases of the disease, and to apply to the first patients and their dejections the preceding rules.

"The necessity of not leaving in the houses, but of transporting to special places, the dead bodies.

"Isolation of the sick.

"Never to forget that even in a pronounced and extended epidemic the barriers opposed to the radiation of every case of cholera in particular, may prevent numerous misfortunes.

"To remember the facts which have been observed of the recrudescence of epidemics in the spring after being quieted by frost, and to take measures to escape the possible subsequent ravages."

The following extracts are translated from a memoir communicated by M. Grimaud to the Académie des Sciences, entitled "Etudes sur la Choléra faites à Marseille en Septembre et Octobre, 1865":—

"*Origin of the Epidemic.*—Sunday, June 11th, at half past two, the Stella, Capt. Regnier, entered the port Napoleon. The ship had left

Alexandria the first of June with 97 passengers, of whom 67 were Algerian pilgrims. She brought the first news of the existence of cholera at Alexandria. On the evening of the same day, June 11th, the Bizantine arrived with 55 passengers, having left Alexandria June 3d, and touched at Malta. On the 15th, the Syria, with the English mail and 320 passengers, and on the 16th the Saïd, with 190 passengers.

"Between the 11th and 16th of June, then, 562 persons arrived at Marseilles from Alexandria, where the epidemic was in the ascendant at the time of their departure. What has become of these 562 persons? They are scattered, but if one could call them by name, the tomb would reply for more than one of them.

"But I have been able to follow, step by step, from the time of their arrival at Fort St. Jean to their departure the destiny of the 67 pilgrims. The ship left Alexandria the first of June, bearing 67 pilgrims from Mecca. Eight days after its departure, June 9th, there were thrown into the sea two of this number, and two days after this, on the 11th, the 65 remaining disembarked, of whom Ben Kaddour succumbed on landing.

"These pilgrims came from Mecca via Djeddah and Suez. From May 20th to June 22d, nearly 20,000, *all more or less infected*, passed Suez, according to the report of the chief physician at the Ismuth, in order to embark at Alexandria for Europe or elsewhere. Between May 20th and June 22d, several thousand of them encamped at Alexandria, near the canal of Madmoudieh. * * * * *

"The populations of Suez, Alexandria, Marseilles, &c., were healthy, when some pilgrims from Mecca, embarked at Djeddah, came in contact with them, and the cholera, which was at Djeddah, declared itself among them. It was at Djeddah when the Marseilles pilgrims left there. Some of them died during the passage; we know three of them—the two who succumbed a couple of days before arriving at Marseilles, and the third who died on touching shore. The cholera travelled with them; they bore it.

"The Arabs left Fort Saint Jean to re-embark. A crowd of the curious of that populous quarter mixed itself with the pilgrims, surrounded them and assisted them in loading their baggage outside the Fort. It accompanied them along the bridge overlooking that old part of the city. Here it was that the first cases of cholera showed themselves. They were rare at first, and their character was misunderstood or concealed. The physicians said, 'let us say nothing about it; it is not necessary to frighten the poor people.' But the cholera did not remain confined to the quarter where it first appeared; on the 22d of June a frightful case was reported by Dr. Forcade in rue de Rome. Thus it is that the cholera has for the sixth time been introduced and developed in Marseilles.

"*Facts of Contagion.*—I have said that the disease leaves its principle in baggage. I mention no doubtful facts. Here is one of many others:—

"Near Saint-Jean-du-Desert, at Saint-Pierre, not far from Marseilles, in an isolated place, a peasant died of cholera; his wife also died. He had not left the country, 'but,' says Dr. Dussiler, 'his wife was a laundress, and had received a bundle of linen belonging to an indi-

vidual recently arrived from Egypt. It was the husband who opened the bundle and unfolded all the pieces.'

"Still another: The postal department of Marseilles numbers 120 persons, of whom 75 to 80 are clerks; 22 are employed at the bureau of departure and 9 at the bureau of arrival. There has not been a single death, or even a case of sickness at the former bureau, while of the latter nine employées eight have been sick and one has died. These eight have been taken sick one after the other; this has been proved of the first five. The one who opened the despatches from the East fell sick, was '*cholérisé*,' was the expression used. Another was put in his place—the same effect, and so on up to the fifth.

"Now all is explained; there is no longer any mystery in the march of the pestilence. The cholera travels with men and with things. Where man and his effects do not travel, there the malady does not show itself. The 562 travellers of the Stella, Byzantine, Syria and Saïd, with their correspondence and effects, disembarked at Marseilles from the 11th to the 16th of June, are scattered in Europe, and wherever they have settled they have sown the seed of cholera. This seed has germinated wherever it has found a soil prepared for its reception, that is to say, constitutions predisposed by feebleness derived from previous illness, from intemperance, or from the non-observance of the laws of public and private hygiene."

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, DECEMBER 16th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	28	42	70
Ave. mortality of corresponding weeks for ten years, 1853—1863	37.8	39.4	77.2
Average corrected to increased population - - - - -	00	00	84.16
Death of persons above 90 - - - - - - - -		0	0

ERRATUM.—The word "Ovariotomy" should be omitted on page 400 of the last number of the JOURNAL.

COMMUNICATIONS RECEIVED.—Proceedings of the Providence Medical Association.

BOOKS AND PAMPHLETS RECEIVED.—Rhinoscopy and Laryngoscopy; their Value in Practical Medicine. By Dr. Friederich Semeleder, Physician in ordinary to the Emperor of Mexico, Member of the Faculty of Vienna, &c. &c. Translated from the German by Edward T. Caswell, M.D. New York: William Wood & Co. 1866.—Transactions of the Twentieth Annual Meeting of the Ohio State Medical Society, in June, 1865.—On Epidemic Cholera, the Phenomena, Causes and Treatment, with an Appendix relating to the Brooklyn (N. Y.) City Sewerage. By Nelson L. North, M.D.—Introductory Lecture at the opening of the New York College of Veterinary Surgeons, Nov., 1865, by Prof. A. S. Copeman.

DIED,—In Lowell, Dec. 13th, Dr. Elisha Huntington, formerly lieutenant governor of this State, and for several years mayor of the city of Lowell, aged 69 years.

DEATHS IN BOSTON for the week ending Saturday noon, December 16th, 70. Males, 28—Females 42. Accident, 4—aneurism of the aorta, 1—apoplexy, 1—inflammation of the brain, 1—bronchitis, 3—cholera infantum, 1—consumption, 9—convulsions, 2—croup, 1—diphtheria, 1—dropsy, 5—dropsy of the brain, 2—dysentery, 1—bilious fever, 1—typhoid fever, 2—disease of the heart, 2—hernia, 1—infantile disease, 4—disease of the kidneys, 3—disease of the liver, 1—inflammation of the lungs, 6—lupus, 1—marasmus, 1—old age, 2—pleurisy, 1—premature birth, 1—puerperal disease, 1—rheumatism, 1—smallpox, 1—teething, 1—unknown, 7.

Under 5 years of age, 20—between 5 and 20 years, 8—between 20 and 40 years, 17—between 40 and 60 years, 10—above 60 years, 15. Born in the United States, 50—Ireland, 13—other places, 7.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. LXXIII. THURSDAY, DECEMBER 28, 1865. No. 22.

ELEPHANTIASIS OF THE SCROTUM.—THE INDIANS OF WASHINGTON TERRITORY.

[Communicated for the Boston Medical and Surgical Journal.]

U. S. STEAMER "SUWANEE," off the Coast of Washington Territory, November 3d, 1865.

MESSRS. EDITORS,—As it is seldom that elephantiasis originates in the temperate zones, according to the authorities that I have the opportunity of consulting, I have thought that you might consider the following case, which I saw yesterday, worthy of publication in your JOURNAL. The subject of it is a Makah Indian of about 50 years of age, living at Meah Bay, Washington Territory, on the Straits of Juan de Fuca, some seven miles from Cape Flattery. Through the kindness of Mr. J. G. Swan, who is teacher of the Indians at this agency, I was enabled to see the case and learn what little I could about it.

The affection consists of an enormous tumor of the scrotum, pyriform in shape, depending from, or somewhat above the pubes, extending down rather more than half way from the knees to the ankles, being about as broad as the patient is at the hips. The color is like that of the rest of the body, except where some thin, scaly scabs cover superficial ulcerations at its lower part. The skin, especially near its neck, is drawn very tense, is adherent to the rest of the tumor, and has few, though large and well-marked hair-follicles. To the feel it is elastic; in its lower half seeming to have elastic bands, between which is a semi-fluctuating substance, resembling a fat abdomen on percussion. The posterior surface has impressions of the legs. There is no appearance of a penis, nor of any aperture in front of the pedicle, which is quite tense and smooth. I have the word, however, of an intelligent white man, who has been at this place for several years, that some three years ago a penis could be seen there, though it was very short. He also states that he is confident that the tumor has increased gradually since then. I should judge that it must weigh close upon 50 pounds, and measure quite four feet in circumference; but owing to the shyness of the Indian, I could make no measurements, and, indeed, found conside-

rable difficulty in getting the hurried glimpse which I did, thanks to a bribe of half a bushel of potatoes. This man walks about, of course awkwardly and slowly, and fishes considerably in his canoe. He says that he has had the trouble some twenty-four years, and attributes it to having met a bear in the woods. As to the manner of its origin, or the symptoms connected with it, I could learn nothing; and if I had, it is probable that my information would have been about as valuable as that concerning its etiology. The patient complained chiefly of the weight and strain on his back and thighs. I advised him to support it over his shoulders by means of a suspensory bag and straps. Owing to the patient's age, as well as his somewhat impaired health, and the enormous size of the tumor, I judge that removal by the knife would not be advisable, though I do not know the usual results in such cases. No other case of the kind is known of in these regions. From the appearance of this tumor, which I have tried carefully to describe, I feel confident that it must be elephantiasis. I have not seen it affecting the scrotum before, but met many cases of it in the feet and legs in the West Indies and in Brazil, and one of the hand at the Massachusetts General Hospital. If any person who is better informed than myself considers my diagnosis incorrect, I should be happy to know it.

From Mr. Swan, who is a well-educated gentleman, as well as a careful observer of facts, and has lived many years among the Indians, and often by necessity has acted as their physician, I learned a few other items concerning them, which, as they may be of interest, I will add, together with a few obtained elsewhere.

He says that their prevailing diathesis is scrofulous, as shown in many chronic ulcerations and in ophthalmia. The latter may be greatly owing to the constant smoke which they keep in their lodges. Although he did not say so, my impression is that phthisis is rather common among them. This scrofulous condition is interesting in connection with the fact that their diet is almost exclusively of fish, and that they use large quantities of oil besides. As showing how fond they are of oils, he says that they all like castor oil, and call it "sweet medicine"! The nervous system is less active than with the whites, as shown in insensibility to pain, and the slight febrile symptoms that follow wounds, which heal readily. He knew of a woman who, going to the brook to drink, gave birth to a child unexpectedly, and returned to the village carrying it on her back. She was up and about as usual in three days. He says that he believes they usually return to their ordinary duties within a week after labor. Difficult labors are uncommon, yet he has known some women to die in consequence. Venereal is rare; rheumatic pains frequent. Having been through a smallpox epidemic among them, he says the disease made sad havoc at first, but that as soon as he attended to keeping them cool in the first stages and to giving them sufficient nourishment in the secondary fever, he met with no deaths. In an

epidemic further north, the sufferers had been put out of doors by the rest, with only one blanket and a little nourishment, and had generally died in a short time. In treating Indians, he had made a practice of giving only half of the usual doses, with satisfactory results.

At an Indian village further up the Straits, I was present at a "pow-wow" by a "medicine man" over a sick, apparently rheumatic woman. She was crouched on the floor of the hut, and in front of her the medicine man, who alternately howled, looking aloft, at times spirting a part of a mouthful of water upon the arm and the rest into the air, seemingly invoking some superhuman aid; and then would seem to have a violent struggle with hands and teeth and lips in extracting something from the arm, which, with loud cries, he would throw into the air. Around the fire was a listless circle of old hags, holding a couple of interested-looking infants, who had their sticks and made their noise, and two or three men, who kept up a monotonous song, and at the same time made a great din by pounding with sticks on boards or tin pans, one of the party having a rude drum. They kept up this performance some three or four minutes in our presence, not seeming to be disturbed by it at all. The patient's arm bore the marks of recent slashes with a knife over the seat of pain.

Mr. S. said that although the Indians on this coast had been reported to be cannibals, he did not believe it. Still he thought it possible that they might have eaten a piece of a prisoner, as they do at times of a living animal, in bravado to show their courage. But even the latter is rare. All the Indians on the Straits and on Puget's Sound belong to the Flatheads, though they go by different names, and, as I was told by a former army officer, originally spoke thirty-eight different languages. Thus it was that the Chinook jargon, the analogue of the lingua Franca, grew up out of the necessity of some common means of intercourse between the whites and Indians; it is used also between different Indian tribes. The papooses are kept fastened for about one year to a straight piece of board by a matting made of cedar bark, and rest upon cushions of the softest inner bark of the same tree. Several folds of the bark are fastened to the board above the head, and then lashed down upon it, flattening and widening it. I have seen some skulls in which this was done diagonally from one side to the other, producing an unsymmetrical deformity, which extends to the bones of the face. The girls have their legs put straight, the boys have theirs bent over a fold of bark.

These Indians have two wives if they can support them, and are very free to leave or change them on slight provocation. Some couples, however, live together constantly. I saw two children who were brother and sister by the mother, but cousins by the fathers, who were both alive at once. Their relationships are quite gene-

rally thus complicated, the different tribes intermarrying but little. They are said not to be as prolific as the whites.

Their religion, Mr. S. says, seems to consist chiefly of worshipping the sun at certain periods of the moon. This they do at sunrise by various dances and incantations. They fully believe that they go down into the earth after death, and that in that other life they have the same bodies as now, though without the bones—a shrewd theology, and one which one of them who was buried in a trance corroborated by telling the rest that he was sent back to this world because he brought his bones with him. Suspended animation, Mr. S. says, is rather common amongst them. He had an interesting allegorical painting, copied from the original, which was meant to represent the origin of thunder. The main figure was evidently intended for a whale, around which were several serpent-headed, hippocampus tailed minor monsters, and above them a large, grotesque, eagle-like bird, the thunder bird. The theory, he says, is, that the thunder bird and the hippocampus-shaped monsters, or lightning, fight with and kill the whale in a storm at sea; and that after that is over the bird seizes some of his former allies and bears them off to the mountains, where he tears them to pieces.

From the same source, I learned a fact which I had not heard mentioned before, which tends to show that the effect of the whites on the Indians, aside from all missionary work, has not been altogether harmful. It is, that whereas each village was stockaded and guarded on the first coming of the whites, and they were even warlike enough to drive the Spanish out of a fort, which they built at Meah Bay, now they have no stockades and very little warfare among themselves, and a few unprotected whites are now living safely among them. But I must close this long communication.

I am, very respectfully, your ob't serv't, DAVID MACK, JR.,
Assistant Surgeon U. S. N.

CONTAGIOUSNESS OF CHOLERA.

BY PETER D. WALSH, M.D.

[Communicated for the Boston Medical and Surgical Journal.]

IN the summer of 1848 the cholera visited Ireland, and made its appearance in July of the same year in the city of Waterford, which contains about 80,000 inhabitants, is built on low marshy land, of granite and brick, and has a beautiful harbor, into which the whole drainage of the city is directed. The tenement houses were well regulated and not crowded. Sanitary regulations were well attended to by the city authorities, and still the cholera made a fearful havoc ere its progress could be stayed.

A friend of mine, who lived at a distance of six miles, made her forenoon call to the city on business, returned early in the afternoon,

and sickened that night. A physician was summoned early the next morning, who pronounced her disease cholera, and she died early that evening. Next in turn, a sister, aged 20, was attacked, and also a female domestic, who washed the linen of the deceased the day after the burial; she lived only twenty-four hours after exposure. A sister to the man of the house next became affected, and she lived only some forty hours. The lady of the house, aged 60, took ill, and died in two days and one night. A daughter, aged 23, next died, in the space of a few hours. A niece of the old lady, aged 30, was taken ill and died in twenty-four hours; a younger sister, aged 18, lived only a few hours. The young man of the house, aged 25, residing in the same street, attended to the burial of his family, and took ill and died in a few hours; also, his wife was attacked with the disease at her own house, but recovered, much exhausted. The old gentleman, proprietor of the house, still survived; friends and neighbors deserted him, and he stood alone in the world, with the exception of one man-servant, who did not leave him in the hour of his affliction. He was totally shut out from the world, and lived in this solitary way for twenty days. On the twentieth day he was taken ill with the cholera, and only lasted a few hours. He was 60 years old. Total number of deaths, ten, in twenty-one days; leaving not a soul in the family.

The house where this disease appeared was located on an eminence, at the angle of a small street, in a village of about 1500 inhabitants; it was one hundred feet in front, three stories in height, built of brick, and had no cellar. It was well ventilated, and the outbuildings, at a considerable distance from the dwelling, were all in perfect order, with everything to promote health and comfort. Some few of the neighbors became victims of the disease at the time, and farmers who were compelled to visit the city were taken home corpses. At length the city became almost totally deserted, people wending their way for safety to the country; dwelling-houses and market places were partially closed, and all were in despair. The disease made its exit from the city at the expiration of five weeks.

I am thoroughly conversant with the facts above stated, as I resided within a mile of the place at the time—the greater portion of the family affected being my own relations.

CLINICAL LECTURES ON AMBLYOPIA AND AMAUROSIS, BY PROF. A. von GRAEFE.

[Continued from page 422.]

CASE IV.—*Cerebral Hemiopia, occurring on similar Sides, stationary, resulting from an Apoplectic Attack.*

August K., weaver of fine cloth, 68 years old, comes to us on account

of deranged sight, consisting partly in double vision, partly in a diminution of the power of distinct perception. An examination shows the double vision to depend on a paralysis of the right abducens. The power of motion of the right eye outwards is reduced 2‴ in comparison with that of the left, the patient having, accordingly, homonymous double images, the distance between which increases towards the right. The remaining derangement of vision consists in a slight diminution of its acuteness in each eye to $\frac{1}{3}$, and in an entirely symmetrical anomaly of the field of vision. This is considerably contracted in each eye on the left side; eccentric vision is, moreover, indistinct over the whole left half, well up to the vertical line of equal division. Inasmuch as the ophthalmoscopic examination reveals no morbid change, except a partial atrophy of the optic nerve (to be referred to hereafter), this hemiopia of the left side must consequently be referred to a paralysis of the right tractus opticus, and the diagnosis of the whole disease may, therefore, be set forth as a paralysis of the right abducens and a paralysis of the right tractus opticus. A general examination reveals considerable and extensive arterio-sclerosis, hypertrophy of the left ventricle and insufficiency of the aortic valves.

From an analysis of the case we gather the following facts. Rather more than three years ago, the patient had an apoplectic attack, which resulted in hemiplegia as also hemiopia on the left side. He was under our treatment at that time, and the records show that the hemiopia, which at first had been nearly complete (failure of the field of vision up to the vertical line of equal division), gave way during the convalescence to the present point, the acuteness of vision rising from $\frac{1}{6}$ to $\frac{1}{3}$. Consequently, since that time, his power of sight has remained entirely the same. Fourteen days ago, the patient was compelled to go out in great haste with uncovered head in the midst of a snow storm, got into a profuse perspiration, the next morning had an acute, though not very severe headache, and, while attacked by no proper cerebral symptoms, noticed diplopia, which afterwards became more marked.

The question first arises as to whether any proper connection is to be established between the two paralytic affections, the loss of power in the right tractus opticus and the right abducens. We are of the opinion that this must be answered in the negative, for the following reasons:—

(1.) The hemiopia is evidently to be traced to the results of apoplexy in the right hemisphere. Its sudden approach, attended by cerebral symptoms and succeeded by this particular affection of vision and hemiplegia of the left side, admits of no other inference. From such an apoplectic source on the right side the paralysis of the right abducens could not evidently proceed, but must be referred to a second effusion on the left side, if connected with any central apoplectic source.

(2.) Supposing any connection to exist between the two affections, as, for example, that a basilar process supervened on the preëxisting cerebral disease of the right side, it would seem remarkable that the sharply-defined traces of the previous attack underwent absolutely no variation, but remained entirely as before. It may be added in this connection that the slight lameness of the left foot, a relic of that attack, has not experienced the slightest modification from the late event.

(3.) It is within the bounds of belief that a circumscribed apoplectic effusion *intra-cerebrum* should give rise to no other symptoms of paralysis than a loss of power in the abducens of the opposite side, as has been seen in cases of facial paralysis; still this isolated action, with no concurrent cerebral symptoms, is in any case improbable. The paralysis of the abducens itself, although not entire, is still very characteristic; consequently if the seat of the cause of the affection were central, we should expect it to cover some ground and cerebral symptoms to coëxist during the period of development.

(4.) An analysis of the case shows the affection to have occurred under circumstances favorable to, and to have developed in the manner of, an abducens paralysis proceeding from external causes.

For these reasons we believe ourselves compelled to regard this recent paralysis of the abducens as of rheumatic origin. Having distinguished between this and the remaining features of the case, let us return to an investigation of the amblyopia.

The ophthalmoscope reveals a senile, ring-shaped atrophy of the choroid around the optic nerve, and besides this a partial, shallow excavation of the papilla, which is not to be regarded as of previous existence (physiological); for in the first place the records, dated at the time of the convalescence of the patient from his apoplectic attack, mention a normal state of the papilla; secondly, the situation of the excavation itself within the papilla is very peculiar. On the right eye, indeed, its place is outwards from the point of exit of the central vessels, extending, however, to the outer edge of the papilla. In the left eye it dips along the inner edge of the papilla, and extends but a short distance beyond the point of exit of the central vessels, so that the surface of almost the entire outer half lies in the same plane with the contiguous retina. Its condition in this eye, therefore, differs materially from that of a physiological excavation. The state of the case admits of no doubt if we employ a largely-magnified inverted image and notice the effect of moving the convex glass.* The edges of the excavation having been once

* It is hardly necessary to state that this allusion refers to the well-known fact that in cases of excavation a peculiar ophthalmoscopic effect is produced by using the inverted image and slightly moving the convex object lens laterally or vertically, keeping always the same distance from the observed eye. The edges of the excavation are seen to move in a different plane from its base, seeming to slide over it. This effect is naturally more marked with an object-glass of comparatively long focal distance, $\frac{1}{24}$ or even $\frac{1}{4}$. It is strange that no allusion is made to the binocular ophthalmoscope, the use of which throws this method completely in the shade.—TRANSLATOR.

found, it may also be made out by the increase of whiteness the part has acquired through the greater prominence of the lamina cribrosa. Inasmuch as the right half of each papilla is affected by atrophic excavation, we have to do with a disappearance of nerve-fibres corresponding with the direction of the hemiopia. I lay the more stress on this result because, with the utmost watchfulness, I never before succeeded, in a case of cerebral hemiopia, in discovering such a change capable of being assigned to one half of the optic nerve. It may be because this occurs so gradually that the proper cases were not observed for a suitable length of time. As has been already stated, up to the close of the previous record, which was taken nearly five months after the apoplectic attack, such a discovery had not been made in the case of our own patient.

The greatest doubt still prevails as to the position in the trunk of the optic nerve of the fibres pertaining respectively to the fasciculus lateralis and cruciatus. I have established, I think, beyond all doubt, the old theory of semi-decussation by the accumulation of exact pathological proof; still it is not yet possible to form a correct conception of the anatomical situation. If, in a case of perfectly sharply-defined hemiopia occurring on corresponding sides, the vertical boundary line of the defective portion did not pass through the point of fixation, but rather through the middle of the "blind spot,"* we should have simply to suppose that the fibres situated in the outer half of the optic nerve (which radiate outwards on the retina) belong to the lateral line, those radiating inwards, on the other hand, to the fasciculus cruciatus. Such a disposition of things, however, would hardly conform with the functional needs, for then the collective impressions originating in the macula lutea would be transmitted to the corresponding cerebral hemisphere (through the fasciculus lateralis), and we should have to sacrifice the main point in the theory of semi-decussation, according to which the impressions made on identical retinal points are brought together in one tractus opticus, and thus to a centre in one cerebral hemisphere. The fact, that in cases of cerebral hemiopia the line of division passes through the point of fixation, requires a portion of the fibres belonging to the fasciculus cruciatus to radiate outwards from the papilla; in other words, to be already situated in its temporal half. It is not, therefore, in cases of atrophy of the fasciculus cruciatus, to be expected that the atrophy should be strictly confined to the inner half of the optic nerve; while, on the other hand, the paralysis of the fasciculus lateralis cannot involve the entire outer half (reckoning from the point of exit of the vessels). On the whole, however, these collections of fibres make up the bulk of the respective halves of the papilla, and in a case of permanent cerebral hemiopia such a state of the papilla as the present would seem very natural.

The prognosis of the case may be given as favorable, as far as regards the danger of blindness. Even were the apoplectic affection of one side, which has lasted so long, to advance, it would only, in accordance with our theory, cause the hemiopia to become more strongly marked; could not, however, lead to an invasion beyond the vertical line of equal division, or even to a permanent and considerable failure of acuteness of vision. Entire blindness can supervene on a one-sided apoplectic affection only (a) when an apoplectic affection developes itself in the other hemisphere; (b) when

* Corresponding, of course, in a projected field of vision to the position of the optic-nerve entrance.—TRANSLATOR.

fresh effusions into the hemisphere originally affected cause general cerebral derangement, perhaps through anæmia; (c) when a basilar disease, directly affecting the trunks of the optic nerves, supervenes; (d) when a limitation of space in the cranium involves compression of the cavernous sinus, and, in consequence, venous strangulation of the papilla; (e) when the continued progress of the encephalo-meningitic disease causes a secondary neuritis. All these possibilities have but little to do with our case. Considering the diseased state of his vascular system, the patient might, to be sure, be seized with an apoplectic effusion in the left hemisphere; such an affection, however, would specially involve the left optic-nerve centre. A fresh and violent effusion on the right side, causing symptoms of general cerebral disease, would either prove fatal or else diminish sufficiently to allow the connection with the left optic-nerve centre to be reëstablished. The purely apoplectic nature of the affection and the absence of all symptoms of implication of the meninges give us at present no reason to suppose any probability of a basilar process. Increase of intra-cranial pressure takes place only in the incipient stage of apoplexy; hence venous strangulation of the papilla, an effect arising only from the prolonged action of such a cause, is not to be seen here, but is especially common with tumors. Derived neuritis (neuritis descendens) finally seems to occur in apoplectic effusions only when reactive prodromal symptoms of a positive character have gained considerably in intensity and extent in the adjacent portion of the cerebrum. In the case of a person who has extensive arterial ossification affecting the action of the heart, and who has already been the subject of an apoplectic effusion, it is of course impossible to foresee the form that later attacks of the same or other affections of the brain may take; this much, however, is certain, viz., that the disease must entirely change its habitation or its shape to produce blindness. A change for the worse (i. e., a more strongly-marked state of the hemiopia) might result from the occurrence of fresh effusions in the right hemisphere, or more extensive changes in the cerebral substance about the previous deposit; still, considering that the condition of things has for three years been entirely *the same*, such apprehensions are of minor consequence. On the other hand, recovery—in other words, restoration of the field of vision—is by no means to be expected. The long duration of this condition of things, and the partial atrophic excavation of the papilla, forbid such a hope.

Be it said in this connection that the resulting on similar sides (i. e., on the left or right side) of limitations of the field of vision or impairments of eccentric vision is very frequent in cases of apoplexy, and that the friends of the patient notice his inability to direct his movements on one side—as, for example, in the taking of things at the table. Central vision suffers commonly but little, when the general derangements caused during the period of development are once over, this being equally true of cases of complete cerebral hemiopia, extending to the vertical line of equal division. This latter affection is much more troublesome

for scholars when it affects the left tractus opticus rather than the right. For in the first case one loses the eccentric impression of what follows,* so essential to rapid reading, while in the latter it only becomes a little harder to catch a new line after having completed its predecessor.

As regards the treatment, there is nothing to be added. No agent could affect the apoplectic residuum, and we have, therefore, only to counsel an anti-apoplectic manner of life and avoidance of well-known predisposing causes.

In a few weeks the patient was again presented. The paralysis of the right abducens and the consequent diplopia had disappeared under a rather inactive treatment, which fact certainly goes to confirm the theory of a rheumatic paralysis; the derangement of vision was of course the same.

CASE V.—*Progressive Amaurosis, coming on under the form of a Central Scotoma, with a simultaneous Anomaly of the Periphery of the Field of Vision.*

August N., 23 years old, a robust-looking countryman, presents himself on account of a derangement of vision, which was first noticed in the left eye six months ago, shortly afterwards appeared in the right, and since that time has steadily progressed. We find in the left eye a large central scotoma, with an angle of aperture of about 20°, within which only bare perception of light exists. Close to the temporal edge of this scotoma the eccentric acuteness of vision is most developed, and diminishes then (the position of the "blind spot" being but a short distance removed from this point) in a nearly normal manner up to the periphery of the field, the sweep of which in the temporal direction is normal. Beyond the nasal edge of the scotoma the field of vision, examined by daylight, seems certainly normal; by subdued lamplight, however, a well-marked indistinctness of the eccentric vision is found to extend to the border of the field, which in this direction is appreciably contracted. Nearly the same state of things obtains upwards, while below the field of vision beyond the scotoma is tolerably normal. The state of the right eye is nearly the same, except only that the scotoma and the anomaly of the field of vision are somewhat less marked inwards and upwards. The patient employs in each eye eccentric fixation, bringing to bear on the object the portion of the retina situated between the fovea centralis and the temporal edge of the optic nerve, as possessing the best lateral vision. He can thus count fingers, with one eye in 6′, with the other in 8′, and with the right can, moreover, decipher the largest letters of the test. During the whole period of development of the disease, and even earlier, the patient has suffered from persistent headache, with a feeling of heaviness, a sense of

* In the German, "excentrisches Vorauslesen." In reading one word on a page, the main sense of the words immediately succeeding is insensibly perceived, although attention be not voluntarily directed to them. The macula lutea takes cognizance of each successive word, and the lateral portions of the retina simultaneously observe what follows. An exact equivalent of the German phrase it is hard to find.—TRANSLATOR.

confusion and occasional giddiness, very marked drowsiness, and in former years from frequent epistaxis; the frontal region, too, on being tapped manifests sensitiveness. In the physical condition otherwise, and the habits of life, nothing of moment is discovered.

The complexion of the case as regards the prognosis is entirely different from that of Case III., where a central scotoma also existed. Our prognosis there was favorable, as far as the danger of blindness was concerned, for the reason that the periphery of the field of vision was entirely normal. But in this case there is, in addition to the scotoma, a considerable contraction of the field of vision upwards and inwards, also an indistinctness of eccentric vision in the same directions. It is this additional fact that causes us to suspect progressive blindness in these cases of central or eccentric interruptions of the field, although with them genuine atrophy seems to be less frequently involved than in the ordinary cases where contractions of the field of vision are alone found (Case II.). In such cases of blindness commencing with scotoma. I have several times had occasion to observe alterations of the cerebral substance following hyperæmia of long duration, and even numerous latent traces of encephalitis. In spite of the bad prognosis we associate with the existence of contraction of the field of vision, we will not refer as unreservedly to the necessary approach of blindness as in a case of genuine atrophy (Case II.), for we have in fact here decided symptoms of cerebral congestion, and it is not beyond the bounds of possibility that treatment addressed to them might bring the loss of sight to a stand-still. The patient states that a brother somewhat younger than himself was attacked a few years ago with cerebral symptoms and loss of vision similar to his own, got worse for six months, lost the ability to read, but since that time had remained about the same.

As regards the diagnosis, the persistent congestive headache, especially the local sensitiveness of the cranium, would tend to make us infer the existence of an inflammatory affection, perhaps a chronic meningitis with cerebral hyperæmia, or even an insidious encephalitis. The symptoms, however, do not justify us in pronouncing a decided opinion.—The present treatment will be that of chronic meningitis, a "milk-cure," leeches behind the ears, by and bye a seton, and sublimate internally.

This treatment was followed up for several months (Iodide of potash, the decoction of Zittmann and the "cold-water cure" being subsequently employed). The cerebral symptoms disappeared almost entirely, the loss of vision, however, seemed to remain stationary for a time, and then slowly progressed. At the time of the patient's dismissal a small streak of the field of vision still existed, inwards from the central scotoma, leading us to infer that the defective portion at the periphery will speedily be merged in the central

portion where vision has failed. In a dim light the patient's movements were already very uncertain. An entirely unfavorable prognosis must therefore be given.

Meanwhile, an examination of the brother of the patient having been made, it was ascertained that while the cerebral symptoms at the commencement of the disease bore the same stamp as in our own case, the physical signs had assumed a different form. The confines of the field of vision had remained entirely normal; the acuteness of vision is now reduced to about $\frac{1}{12}$, owing to an ill-defined central scotoma with an angle of aperture of from 6° to 8°; there is also a moderate amount of atrophic degeneration of the papilla. This state of things has lasted in the present case about four years, and has not yielded to the various remedial measures that have been meanwhile employed. It comes under the head of Case III. Probably both brothers were affected by the same original cause, acting however to a different degree, and exerting consequently a different effect. It has previously been observed that even the benevolent forms of amblyopia arising from causes connected with the circulation (for example amblyopia potatorum), pass into a form of amaurosis if the cause become more active; and it is especially probable that permanent central scotoma, in the course of which is developed a partial atrophy of the optic nerve, visible on the papilla, needs only the more vigorous action of the same cause to produce progressive atrophy. This undeniable connection of cause should not of course prevent us from making a distinction as regards symptoms in forms of disease the prognosis of which may be widely different.—I have observed hereditary transmission, the possibility of which we cannot deny, less frequently in genuine atrophy than in cases of congestive amblyopia, where the field of vision is either normal or where central interruptions exist; a fact which need not surprise us when we consider the frequent inheritance of a congestive tendency.

[To be continued.]

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE PROVIDENCE MEDICAL ASSOCIATION. BY W. H. TRAVER, M.D., SECRETARY.

The following cases were reported by Dr. Collins.

Puerperal Convulsions—Recovery without Treatment.—The patient was a Swiss woman, aged 20, primipara, full habit, health good. Labor commenced early on the morning of Nov. 8th. It was slow, and but little progress was made until towards evening, when the head began to descend through the inferior strait. By eight o'clock, it had passed into the pelvic cavity, at which time she was taken with convulsions. Delivery was very soon effected by the forceps. She

had no convulsions after the birth of the child, but did not recover consciousness until 4, A.M., of following morning. She had quite profuse hæmorrhage after the delivery of the afterbirth, for which she took a few doses of the wine of ergot. No other medicines or remedy were used. She made an excellent recovery.

Gun-shot Wound of the Fore-arm.—An Irishman, about 35 years of age, in a drunken brawl, on the night of the 16th of November, was shot, at short range, by a Minié ball fired from a United States musket, in the hands of a returned colored soldier. The ball took effect in the lower part of the middle third of the right fore-arm, upon the posterior surface. The radius was uninjured. The ball passed diagonally through the arm, severing the ulna and probably one or both of the inter-osseous arteries. About two inches and a half of the ulna was carried away, making a very large lacerated wound at the place of exit. He was not seen until nearly an hour after the injury, and had lost much blood. Fainting supervening, the bleeding ceased, so as to furnish no guide to the ends of the wounded arteries, and the surrounding circumstances being unfavorable for an operation, it was decided to dress the wound and leave the divided arteries untied. This was accordingly done by iron wire ligatures and adhesive straps, and the arm bandaged and placed upon a splint. The case has done perfectly well since, and up to the present time (Dec. 12th) there has been no secondary hæmorrhage.

Annular Stricture of the Intestine from Carcinoma.—The specimen was exhibited. The patient, S. P., a married man, aged 38, engraver, of good habits, had enjoyed good health up to the 18th of July last. About that time, after eating quite freely, he had an attack of vomiting, after which he continued to have similar attacks almost weekly until October, although he continued in his business and took no advice. He suffered little or no pain, and the vomiting appeared to occur without any apparent effort. In October the vomiting became more frequent, sometimes several times a day, and he sought advice. He obtained no relief, and came under the care of Dr. Collins on the 2d of November, who attended him until his death, which took place on the 23d. During this time he suffered no pain. The pulse was generally about 80; no heat of skin; tongue rather dry; urine small in quantity, but normal; bowels torpid; very restless, and sleep disturbed; mind torpid, but clear when aroused.

The vomiting was more or less frequent, sometimes but once in twenty-four hours, but generally oftener, depending, however, upon the amount swallowed. The matter vomited was of a dark-brown color and very offensive. It was evidently colored by bile. It contained no blood or *sarcinæ* until the day before death, when blood was thrown off. He emaciated rapidly, and for some days before death the skin began to present purpuric spots, which before the close were almost universal. He was nourished for a time with injections of albumen and beef-tea. This he finally refused to receive, and soon sank from exhaustion resulting from emaciation.

Post-mortem.—The organs were generally in a healthy state. The mucous membrane of the stomach was congested and very dark; the pylorus healthy. On tracing the intestines downwards, about two feet from the stomach, was found an annular stricture, reducing its calibre to the size of a crow-quill. The obstructions appeared to con-

sist of a very narrow annular tumor surrounding the intestine, or rather developed in the mucous or submucous cellular layer. It had a hard feel, but the inner surface presented something of a fungous look. It was evidently of a carcinomatous nature. The portion of intestine above the stricture was dilated, devoid of plicæ, and presented a dark-red or blackish-red appearance. The part below was contracted, contained but little matter, and was nearly normal in color.

Injury to the Tibia.—Dr. Caswell briefly reported the following case of injury to the tibia. The patient, a boy about 10 years of age, received the full force of a heavy blow from an axe upon the upper portion of the lower third of the right leg. The axe cut through the muscles, severing the anterior tibial artery, and cutting through the tibia longitudinally for about four inches upon the external, and two inches upon the internal surface. The bone was sprung forward so as to render its replacement impossible. The artery was tied, the end of the severed portion of bone taken off, and the edges of the wound brought together. The patient was convalescing rapidly.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, DECEMBER 28, 1865.

Endoscopy.—Certainly one of the most ingenious applications of the art of direct exploration and physical examination of the condition of the blind passages and internal organs of the human body, which modern professional zeal and enterprise has discovered, is that known by the name of Endoscopy. It boldly attempts and succeeds in accomplishing the direct, ocular examination of narrow canals and obscure cavities which until now have never admitted during life the light of day, and which would seem to most persons, *a priori*, to be entirely beyond the study of the most inquisitive research applied in this way. But modern medical exploration has not yet reached its limit, it would seem, and by the method of which we are speaking it now reveals the secret lacunæ of the urethra, and even the interior of the bladder itself, to the most thorough and exact ocular scrutiny. As yet the practice of this method may be said to be in its infancy merely; it is in the hands of but few practitioners, but the results already attained are such as to warrant the hope that it will furnish the means of rational and successful treatment in some most serious complaints, which have hitherto been to a very great extent treated blindly and rudely.

Endoscopy is an art rather than a science, inasmuch as it consists merely in a method of exposing, by means of ingenious mechanism, to visual inspection and study hidden regions hitherto unexplored in this way. To the late lamented Dr. John D. Fisher, of this city, belongs the credit of having first devised an apparatus for this purpose, identical in principle and similar in structure to that which is employed with so much success in France at the present time by Desormeaux, and by Dr. Cruise in Dublin. So long ago as 1824, Dr. Fisher contrived his instrument, but it does not seem in his hands to have attracted the attention it deserved or to have accomplished the

results of which it is plainly capable. At the present time endoscopy is in active employment by both of the gentlemen who have taken it up since the decease of Dr. Fisher. Dr. Cruise's instrument is that which has produced the results with which we are best acquainted, and its structure is quite simple and easily understood.

The apparatus consists of a lantern for the purpose of illumination, and a system of tubes and instruments by which its light is made available. Dr. Cruise employs the flat flame of a petroleum lamp, placed with the edge towards the exploring tube. This lamp is enclosed in a wooden case, to avoid the inconvenience of the heat and the diffused light, with an opening opposite the flame on one side. In this opening a strong condensing lens is set, through which the light passes into the eye tube. This is a short tube, something like the tube of a microscope, but shorter, which is screwed to the side of the lantern opposite the opening. It is so jointed to the lantern, to which it is attached by its side, that it can be freely rotated, but in use it is generally kept in a horizontal position. The condensed light from the lantern, having entered the eye tube through the lateral opening, falls on a perforated mirror set in this tube at an angle of 45°, by which the ray is reflected and thrown away from the eye of the observer along the axis of the tube. A small central opening in the mirror enables the eye of the observer placed behind to follow the light to the deepest recesses to which it may be directed. For examination of the urethra a tube, the narrow portion of which is of the size of a large catheter, and six inches long, is fitted to the end of the eye-tube. Just before junction with the eye-tube it gradually expands, so as to give it a diameter large enough for the practical application of the instrument. When this tube is adjusted in the manner described, and introduced into the urethra, the effect is most marvellous. The whole canal can be examined most carefully, and the slightest local affection of whatever kind can be made out with perfect distinctness. In his interesting account of this instrument and its uses, Dr. Cruise gives colored plates showing the appearances of this canal, both diseased and healthy, even as far back as the prostatic portion. Having obtained a fair view of any morbid condition of the urethra, Dr. Cruise proceeds to apply the requisite treatment directly to the part affected. This is done by means of an opening on one side of the dilated portion of the urethral tube, by which he is able to introduce instruments for the purpose as far as may be necessary. He thus avoids the necessity of applying remedies in the usual way, by which the whole urethra is subjected to the stimulus of an injection or exposed to the danger of laceration in a case of narrow and obstinate stricture. In chronic blenorrhagia, for instance, he applies his caustic directly to the granular surface of the membranous portion of the urethra with as much accuracy as the oculist does to the granulations of an old conjunctivitis. He is able also to watch the effect of his treatment from day to day, and is thus enabled to graduate the strength of his applications to the actual condition of the affected part, instead of trusting to the uncertain guide of the sensations or statements of the patient. Surely this is a great advance in practical surgery!

Another class of affections which the endoscope has furnished the means for successfully treating is stricture of the urethra. The most

obstinate resistance on the part of these sometimes impervious obstructions of this canal have yielded to the insinuating power of a fine bougie passed under the eye of the observer. Dr. Cruise mentions several instances of this. In one, M. Civiale had tried for twenty-eight days to pass a sound through the stricture without success. At the second attempt, Mr. Desormeaux, by the aid of the endoscope, passed a fine bougie through the constriction, and from that time the case went on favorably. In another case, of a patient 73 years old, repeated attempts by Dr. Cruise to pass a bougie failed, until he employed the endoscope, by which his efforts were finally crowned with success, and gradual dilatation was employed until the canal was enlarged to its full dimensions. By means of this instrument, also, internal urethrotomy is disarmed of most of its dangers, the knife being applied directly to the part requiring division under the direct observation of the operator. This operation has been very successful in these cases in the hands of M. Desormeaux, and it will undoubtedly often obviate the necessity of perineal section or of puncture of the bladder.

But the use of the endoscope is not limited to the canal which evacuates the bladder—it is made to explore that organ itself. By means of a catheter with a short curve, furnished with an opening on its convex surface, supplied with a glass window, the light from the lantern is thrown directly into the bladder. In this way Dr. Cruise has succeeded in perfectly examining the prostatic portion, the fundus and greater part of the posterior surface of this organ. In one instance of inflamed bladder, he made the condition of the lining membrane as visible to another observer as, to use his own words, "the conjunctiva of an inflamed eye." The *experimentum crucis* to which Dr. Cruise was subjected by his colleague, Dr. McDonnell, would seem to settle the question of the capabilities of the instrument for the purposes of accurate examination. This gentleman placed in the bladder of a dead body several articles, of the nature of which Dr. Cruise was not previously informed. By means of the endoscope he was enabled to make them out to be a Minié bullet, a brass screw with a milled head, and a mass of plaster of Paris! Surely accuracy of diagnosis can go no farther.

At the present day, when specialties are occupying the attention of so many industrious members of the medical profession, the endoscope promises to be fruitful of valuable results. Its use must require a certain amount of patience and dexterity, which can hardly be looked for from every general practitioner. With the laryngoscope it cannot fail to reward the labors of those who, by a natural gift or by a special cultivation of the capabilities of the instrument, will be enabled to substitute positive knowledge for conjecture, and direct application of remedies for blind treatment, in the management of a class of cases, many of which are among the most serious which the surgeon is called upon to treat.

Progress of the Cholera.—The Government of France has announced, through the *Moniteur*, that the proportion of deaths daily occurring in Paris from and during the present epidemic of cholera, has not exceeded one in twenty thousand persons, and that the ordinary daily average of mortality has only been increased one half by the number of deaths attributed to cholera.

The epidemic is now virtually at an end in Paris, and is about to pass into the events of the past. The Emperor Napoleon has behaved admirably in this crisis, and one of his latest acts in connection with the outbreak will be received by the Medical Profession, here as well as in France, with signal favor.

"The Marquis de Lavalette, Minister of the Interior, accompanied by M. Haussmann, Prefect of the Department of the Seine, and M. Boitelle, Prefect of Police, visited the Hotel-Dieu and the Hospital Beaujon. The Minister of the Interior announced that the Emperor, sensibly touched by the indefatigable zeal of the House Surgeons and students in the Cholera Hospitals, and desiring to recompense their entire body in the persons of two who had particularly distinguished themselves, had named M. Legros, Surgeon at the Hotel-Dieu, and M. Lelion, of the Hospital Beaujon, Chevaliers of the Legion of Honor."

The theory of the animalcular origin of the disease has been revived by Dr. Cunniere.

On the whole, this week we may report favorably as to the general condition of Europe. In England the Registrar-General's returns are free of all report of cholera, and in Spain the epidemic has ceased. In Malta there was a brief recurrence of the disorder on the 4th, at Fort of Elmo, but the attack was short in its duration, and since the 10th we have not heard of a fatal case. In Naples the disease is still violent, but we get no authentic records, showing the precise number of cases and deaths.—*Med. Times and Gazette* of November 26th.

Amputation, Disarticulation and Resection Statistics of the Confederate States Army.—Amputations of the thigh, whole number, 507; primary, 345; recovered, 213; died, 132; 38 per cent. Secondary, 162; recovered, 43; died, 119; 73 per cent.

Amputations of the leg, whole number, 464; primary, 314: recovered, 219; died, 95; 30 per cent. Secondary, 150; recovered, 76; died, 74; 49 per cent.

Amputations of the arm, whole number, 434; primary, 294; recovered, 252; died, 42; 14 per cent. Secondary, 140; recovered, 87; died, 53; 37 per cent.

Amputations of the fore-arm, whole number, 114: primary, 69; recovered, 61; died, 8; 12 per cent. Secondary, 45: recovered, 35: died, 10; 22 per cent.

Disarticulations, whole number, 135: primary, shoulder-joint, 79; recovered, 54; died, 25; 31 per cent. Primary, elbow-joint, 4: recovered, 3; died, 1. Primary, wrist-joint, 7; recovered, 5: died, 2. Primary, hip-joint, 3; recovered, 1; died, 2. Primary, knee-joint, 5; recovered, 2; died, 3. Secondary, shoulder-joint, 28; recovered, 8; died, 20; 71 per cent. Secondary, elbow-joint, 3; recovered, 3; died, 1. Secondary, knee-joint, 6; died, 6.

Resections, whole number, 130; primary, shoulder-joint, 41: recovered, 28: died, 13: 27 per cent. Primary, elbow-joint, 25: recovered, 22: died, 3. Primary, wrist-joint, 2: recovered, 2. Primary, knee-joint, 2; died, 2. Secondary, shoulder-joint, 26: recovered, 19; died, 7; 21 per cent. Secondary, elbow-joint, 29; recovered, 23;

died, 6. Secondary, wrist-joint, 1; recovered, 1. Secondary, hip-joint, 2; recovered, 1; died, 1.

Amputations of the foot; primary—Chopart's, 16; recovered, 13; died, 3; Symes's, 2; recovered, 2; Pirogoff's, 4; recovered, 2; died, 2. Secondary—Chopart's, 8; recovered, 7; died, 1; Symes's, 4; recovered, 4 (1 unsuccessful, requiring subsequent amputation above the ankle-joint).

A vast number of additional operations are received, but without positive results, and therefore they have not been included in the above list.

We may well be satisfied with the results of these statistics, which, carefully excluding all doubtful cases, are compiled from those operations only that have reached a positive conclusion. A general summary of the above table shows that the mortality after 1,814 operations, including amputations, resections and disarticulations, amounted to 632, giving a death ratio of 34 per cent.

The only statistics on this subject from the Federal army we find in the *United States Army and Navy Journal* for November, 1863, which gives the amputation statistics for September, October, November and December, 1862, as follows:—Whole number, 1,342; deducting 516 under treatment January 1, 1863, 826. Of this number, 336 died; a mortality of 40 per cent.

The journal to which we owe the above observation gives the following table:—Whole number, 1,342; returned to duty, 100; furloughed, 25; deserted, 11; discharged, 350; died, 336; secondary operation, 34; under treatment January 1, 1863, 516.—*Richmond Medical Journal,* and *Confederate States Medical and Surgical Journal.*

Ozone. Dr. B. W. Richardson.—The following are the reliable facts known up to this time respecting ozone: 1. Ozone in a natural state is always present in the air in minute proportions; viz., one part in ten thousand. 2. It is destroyed in large towns, and with special rapidity in crowded, close, and filthy localities. 3. Ozone gives to oxygen properties which enable it to support life. In this respect it acts like heat; its effects are destroyed by great heat. 4. Ozone diffused through the air in minute quantities produces, on inhalation, distinct symptoms of acute catarrh. 5. When animals are subjected to ozone in large quantities, the symptoms produced, at a temperature of 75°, are those of inflammation of the throat and mucous membranes generally, and at last congestive bronchitis, which, in carnivorous animals, is often rapidly fatal. 6. When animals are subjected for a long period to ozone in small proportions, the agent acts differently, according to the animal. The carnivora die, after some hours, from disorganization of the blood separation; but the herbivora will live for weeks, and will suffer from no acute disease. 7. The question whether the presence of ozone in the air can produce actual disease, must be answered cautiously. Science has yet no actual *demonstrative* evidence on the point. But the facts approach to demonstration that catarrh is induced by this agent. All else is yet speculative. 8. During periods of intense heat of weather the ozone loses its active power. 9. On dead organic matter undergoing putrefaction, ozone

acts rapidly; it entirely deodorizes by breaking up the ammoniacal products of decomposition. At the same time it hastens the organic destruction. 10. There is an opposite condition of air in which the oxygen is rendered negative in its action, as compared with the air when it is charged with ozone. Air can thus be rendered negative by merely subjecting it, over and over again, to animals for respiration. The purification of such air from carbonic and other tangible impurities, does not render it capable of supporting healthy life; but oxone restores the power. In a negative condition of air the purification of the organic matter is greatly modified, and the offensive products are increased. Wounds become unhealthy and heal slowly in such negative air. 11. There is no demonstrative evidence, as yet, that any diseases are actually caused by this negative condition of air; but the inference is fair that diseases which show a putrefactive tendency are influenced injuriously by a negative condition of the oxygen of the air. It is also probable that during this state decomposing organic poisonous matters become more injurious. 12. As ozone is used up in crowded localities, and as it is essential that ozone should be constantly supplied in order to sustain the removal of decomposing substances and their products, no mere attention to ventilation and other mechanical measures of a sanitary kind can be fully effective, unless the air introduced be made active by ozone. Fever hospitals and other large buildings in town should be artificially fed with ozonized air.—*New York Med. Journal* and *British Med. Journal.*

Suicides in France.—A work just published in France by Dr. Brismont, states that over three hundred thousand Frenchmen have committed suicide since the commencement of the present century. Of these he has carefully analyzed four thousand five hundred and ninety-five cases. He finds the majority of suicides to fall between the fortieth and fiftieth year; in Paris, however, the majority occur between the twentieth and thirtieth. Two children under nine, and one under five, killed themselves. More people commit suicide between seventy and eighty than between thirty and forty. Fewer women than men commit the act.

The following table exhibits the various modes of suicide in France between the years 1827–60:—

		Men.	*Women.*
1. Strangled by hanging	14,806	12,152	2,655
2. Drowned	11,845	7,668	4,177
3. By firearms	4,390	4,337	53
4. Asphyxia from charcoal	3,224	1,917	1,307
5. By sharp-pointed instruments	1,522	1,272	250
6. Voluntary leaps from high places	1,380	862	518
7. Poison	756	474	282
8. Other causes	282	228	54
	38,205	28,910	9,340

Treatment of Cattle Plague by the Sulphites.—The following letter appears in the *Daily Review*:—"I have had a number of cases on a farm which I occupy. On seeing Dr. Smart's recommendation and prescription for dosing all the unaffected animals with sulphite of soda as a disinfectant, I immediately set to work and had each given

its quantum—viz., one and a half ounce in a half bottle of water almost daily. I beg now to state that all the animals dosed previous to being seized have recovered under the treatment of the inspector, while those who were not dosed all died.—G. D."—*London Medical Times and Gazette.*

Hospital for the Hopelessly Insane.—The General Assembly of Connecticut at its last session appointed a special committee consisting of Mr. Smith on the part of the Senate, and Messrs. Rice of Farmington, Kingsbury of Waterbury, Munson of Seymour, and Chaney of New London, on the part of the House, to ascertain the number and condition of the incurable insane in that State, the object being to erect a hospital specially designed for the treatment of such persons. The Legislative committee on humane institutions reported unanimously in favor of such an institution. The special committee named above lately visited the Retreat in Hartford, and found about one hundred persons who are considered incurable of their malady; there are at least one hundred more in almshouses and private keeping throughout the State.

Iowa Medical Society.—At the last annual meeting of the State Medical Society of Iowa, held at Ottumwa, the following officers were elected for the ensuing year:—*President,* Dr. J. C. Hughes, of Keokuk; *Vice President,* Dr. J. Williamson, of Ottumwa; *Secretary,* Dr. J. W. H. Baker, of Davenport; *Treasurer,* Dr. Wm. Watson, of Dubuque; *Corresponding Secretary,* Dr. W. F. Peck, of Davenport; *Censors,* Drs. M. B. Cochrane, S. B. Thrall, A. G. Field, J. M. Shaffer, James Gamble.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, December 23d, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week	46	35	81
Ave. mortality of corresponding weeks for ten years, 1853—1863	40.8	40.5	81.3
Average corrected to increased population	00	00	88.6
Death of persons above 90		1	1

Erratum.—In our last number a slight inadvertence in translating gave a very erroneous character to the fifth paragraph on page 426. It should read, "The density of the soil over which the dejections are spread diminishes," &c.

Books Received.—Obscure Diseases of the Brain and the Mind. By Forbes Winslow, M.D., D.C.L. Oxon, &c. &c. Second American from third and revised English Edition. Philadelphia: Henry C. Lea.

Died,—In Woolwich, Me., Dec. 19th, of heart disease, Dr. Cleveland Buck, an old and highly esteemed physician of that town.

Deaths in Boston for the week ending Saturday noon, December 23d, 81. Males, 46—Females 35. Accident, 3—disease of the bowels, 2—congestion of the brain, 3—disease of the brain, 3—bronchitis, 2—burns, 1—consumption, 17—convulsions, 2—croup, 1—diarrhœa, 1—diphtheria, 5—dropsy of the brain, 1—epilepsy, 1—exhaustion, 1—typhoid fever, 2—typhus fever, 1—disease of the heart, 4—infantile disease, 1—insanity, 1—disease of the kidneys, 3—leucocythæmia, 1—disease of the liver, 1—inflammation of the lungs, 9—old age, 4—puerperal disease, 1—scalded, 1—scrofula, 3—smallpox, 1—teething, 1—unknown, 4.

Under 5 years of age, 23—between 5 and 20 years, 13—between 20 and 40 years, 29—between 40 and 60 years, 8—above 60 years, 8. Born in the United States, 61—Ireland, 15—other places, 5.

THE

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CLINICAL STUDY OF THE PRESENT EPIDEMIC OF ASIATIC CHOLERA.

BY DR. C. LASEGUE, PROFESSEUR AGREGE, &C., MEDECIN DES HOPITAUX, AND CO-EDITOR OF THE ARCHIVES GENERALES DE MEDECINE.

[Translated for the Boston Medical and Surgical Journal from the Archives Générales for November.]

IT has been the custom not to describe epidemic diseases until, after having accomplished their complete evolution, they have ceased to make their melancholy influence felt. It is then only that we are able to sketch the picture of the symptoms and to represent truthfully all the possibilities of the disease. Perhaps, nevertheless, it may not be without its advantages for physicians to be instructed less tardily, even if something unforeseen should be omitted. I have thought that in making at the present time a summary description of the cholera epidemic, as it actually appears at Paris, I might possibly meet the wishes often expressed by physicians.

The brief descriptions which follow have been exclusively collected at the bedside of the patients, either in the city or in the male cholera wards under my charge in the hospital Necker. In relating the facts which I have witnessed I have avoided all theoretical interpretation, and have even thought that I ought to abstain from all parallel with preceding epidemics: I have had no object in view but to furnish materials for a more profound study.

The present epidemic of cholera has not been announced by any of the morbid conditions that have been set down as the precursors of the disease. The public health was as it usually is at this time of the year.

Either from the action of the extreme heat of the autumn or for some other reason, gastric difficulties have appeared in great numbers, and frequent examples are still met with. They have appeared to come on with a peculiar activity. The tongue was coated from the first, there was considerable general uneasiness, and the attack yielded speedily to an emetico-cathartic. These cases, in other respects, presented nothing peculiar.

Since the invasion of cholera, the gastric troubles, without chang-

ing their character, have been accompanied by some symptoms which ought, I am persuaded, to be attributed to the previous anxiety of the patients. Courageous as one may be, it is impossible to avoid a certain apprehension when he finds, during an epidemic of cholera, that he has a complaint of the stomach and bowels. It is the habit of diseases of the stomach to give warning by sensations which no one escapes, and which are interpreted differently according to the temperament of the patient. Thus patients feeling either a gastralgia or nausea, tormented by the desire to vomit without the ability, or troubled by transient pain in the bowels, are very easily alarmed. Next comes on a chill or an exaggerated precordial anxiety, or trembling of the limbs, which redouble their fears. We should hardly be authorized in attributing entirely to fear the morbid condition which is revealed by positive signs; at the utmost we may make it chargeable as a complication.

Diarrhœas have not seemed to me more frequent than usual; but I do not accept this generic term as representing a disease. Diarrhœa figures, in the statistical tables of every country, among the affections which cause a considerable mortality; as long as this vague term is employed, the information will remain without any professional value.

I have seen, like all physicians, many people affected with accidental diarrhœa, produced by imperfect digestion, succeeding more or less rapidly to the use of improper food, or a meal taken under unfavorable circumstances. In these cases the matters passed were feculent, of dark color and characteristic odor, and the diarrhœa yielded of itself, without leading to any particular manifestation. It is very different with certain forms of diarrhœa upon which I propose to dwell more at length.

The treatment employed, either for the gastric difficulties or diarrhœas of simple indigestion, has often been more prejudicial than the malady itself. The patients, imperfectly instructed or timid to excess, have hastened to repress the symptoms of their complaint without taking into the account the disease itself. They have swallowed precipitately laudanum, stimulating alcoholic drinks, or the subnitrate of bismuth. The affection restrained without benefit, there resulted an increase of the malaise, of the thirst, a slight febrile reaction, and above all a colic which is combatted by the same means.

Physicians, in view of the definite responsibility imposed upon them, hesitate to have recourse to a radical treatment, which the patients themselves receive with great distrust. Without being a partizan of emetico-cathartics at the commencement of confirmed cholera, I have seen no other than a good result from their employment in those affections which do not partake in any degree of the influence of the epidemic. I am convinced that in overcoming these complaints, which have a tendency to be protracted, we diminish

rather than augment the predisposition to contract the reigning malady. It has not happened to me once to see any bad effects from a purgative, even an active one, or from an emetic when indicated. When the gastro-intestinal affection has been suspended in its regular evolution by the use of astringents or opiates, and constipation is thus established, patients complain of heaviness of the head, swelling of the belly, pain after food, lassitude, &c., all of which are dissipated by a saline cathartic or a moderate dose of rhubarb.

The diarrhœa caused by the prevailing epidemic, even when it is not destined to a serious termination, has peculiar characters. Preceded by a severe colic, it consists from the first of a liquid evacuation, serous, abundant and more or less colored. The evacuations follow more or less rapidly, every hour or two, often with a longer interval even. After the second or third evacuation the discharges are pale, whitish, quite like thin paste; they are passed without pain, and do not occasion even a sensation of tenesmus or burning; their quantity is always relatively considerable. During the intervals the patient feels rumbling in the bowels, which the hand perceives when laid upon the belly. Pressure does not excite severe pain, nor is there tympanites. The evacuations, in spite of their abundance, are not followed by the sense of weakness which succeeds so commonly to less copious evacuations. When, after five or six stools, the nature of the substances passed is not changed, and the excretion has become neither more watery nor more colorless, it is a favorable sign. In grave cases, or those destined to become such, the stools take on before this time the true cholera aspect.

The vomiting, although not very frequent, is already a harassing complication, whatever may be the nature of the liquid discharged from the mouth. A certain number of cholera patients continue to vomit greenish matters long after the stools have become exclusively serous.

The general condition of the patient furnishes the most important indications for a prognosis. Sometimes the skin remains warm, the eyes are only slightly sunken, the pulse is full and frequent, in spite of the persistence of the white diarrhœa. Sometimes the influence of the cholera appears by different signs. We find some one of the symptoms of cholera either singularly limited or strangely localized. In some dyspnœa comes on without any sense of chill, even partial; in others it is a precordial distress; in others, cramps of the lower limbs, or even in a single limb. There are some in whom there is no coldness, except of the tongue, or the nose, or the hands; who complain only of thirst, of trembling, or of suppression of the urine. Each one of these warnings, slight as it may be, deserves to be taken into consideration, since by itself alone it indicates the threatening, if not the speedy coming of a change.

This is, if we may accept the term, the true diarrhœa, not pre-

monitory, but precursory. Most persons thus attacked, if suitably cared for, have a good chance of recovery; but it must not be forgotten that cholera slowly developed presents relatively benign symptoms, and is consequently the most amenable to treatment.

Among workmen and people little anxious about their health, many recover spontaneously, by simple rest in bed and warm drinks, without calling in a physician. Others, not regarding their indisposition, continue their occupation and mode of life. The disease, in fact, has this peculiarity in certain cases, that it does not impair the appetite, causes only slight lassitude, and occasions neither physical depression nor mental anxiety.

In a young man employed in a commercial house, the specific diarrhœa began on Saturday. Five or six evacuations, of which he gave a very exact description, occurred during each day; in the morning only he had some vomiting. The patient did not give up his occupation, and it was only on the Saturday following that he came to consult me at the solicitation of one of his friends. His tongue was cold, his nose was blue, the general circulation was good, the heat of the body was normal; the urine had not been suppressed, but it was not passed except with the stools. This young man, transferred at once to the Municipal Maison de Santé, died at the end of twenty-four hours.

In different establishments where the people can be subjected to strict surveillance, they have succeeded almost always in checking these symptoms, which are slowly progressive. The sick who have presented themselves as out-patients at the hospital, complaining of a serous diarrhœa which dates back two or three days and presenting as yet only local and incomplete cholera symptoms, received and treated immediately, have recovered, without exception.

The medical treatment varies according to the individual case. If the tongue is coated, if the patient has nausea or vomits, I believe we may have recourse to ipecac; at the same time, in hospital cases, the patients having almost always been under the influence of the diarrhœa at least for three or four days, and being very weak, I prefer rather a stimulating treatment, which restores at once the warmth, easily recalled at this period. Once warmed the patient may be treated deliberately, as if he were under the influence of a diarrhœa of less serious character. Opiates in small doses, absorbent powders, astringent injections, are ordinarily sufficient. Even at this period, I do not ordinarily suspend alimentation completely, and I believe that porridge is generally the best vehicle for opium. I give every three hours a tablespoonful of wine of cinchona containing two drops of laudanum, and immediately afterwards two teaspoonfuls of thick tapioca. The injections are not given until the next day, or the day after even, if the diarrhœa does not abate with sufficient rapidity. Rest in bed is imperatively maintained. Little drink is given, and by preference bitter aromatic infusions.

The indications drawn from the state of the body are perhaps more significant than those furnished by the stools. I attach great importance to the presence or absence of gurgling under the pressure of the hand, and to the nature of the intestinal rattling thus produced. The evacuations are but the most evident symptom of a diarrhœa which may persist without discharges, or which may not continue after the last evacuation. Simple as this recommendation is, not to take the dejections as the only measure of the intestinal secretion, it is not useless, as the physician is too often inclined to accept them as the only measure of the diarrhœa.

Recovery takes place either suddenly or gradually: in the first case constipation succeeds immediately to a serous, whitish evacuation, identical with those which have preceded; in the second, the evacuations approach each time more and more in color and consistence to the normal condition. When the diarrhœa is thus arrested suddenly, it is well on the next day to prescribe a light purgative, under pain of allowing a general malaise to develope itself, characterized particularly by gastric pains and headache.

I do not wish here to discuss, not having the facts before me to determine it, the question of the greater or less frequency of the premonitory diarrhœa; it does not seem to me that the problem should be stated in the terms in which it is customary to present it.

Clinically there exist two forms of cholera—the one slow, progressive, proceeding by the successive evolution of symptoms, and allowing the physician time to observe and interfere; the other, identical in its progress, but so rapid, so vast, that days are represented by hours and almost by minutes. Both begin with the same diarrhœa, both may end in the same fatal event. The diarrhœa is the necessary antecedent, it governs without exception the other symptoms; only, in acute cases, the succession of events escapes our examination, and they seem to appear simultaneously. Whether in the diarrhœa which precedes for eight days the other phenomena of cholera, or that which precedes them for an hour, we find an uninterrupted series of steps.

The forms called overwhelming *(foudroyantes)*, in which the first choleraic stool is the disease itself, are so common that no one has thought of denying their existence. In order to tranquillize the public mind its frequency is dissembled, and this deception has its excuse, but it would be unreasonable to give it the semblance of a scientific fact. In point of fact, as is always the case, some patients enjoying full health, sober, robust, young or old, having in no way transgressed the laws of a strict hygiene, are taken with a sudden diarrhœa which, from the first evacuations, has the specific aspect; the symptoms are crowded together tumultuously rather than succeed each other; in less than an hour the patient is under the stroke of confirmed cholera.

The grand attack, of which I need not recal the characters, too

well known and never to be forgotten, has nothing to distinguish it from the cholera which I observed in 1847 in Russia, in 1849 and 1854 in Paris. It is only in studying simply the principal symptoms that one has a chance to observe any peculiarities in the present epidemic which may happen to exist.

The variable coldness, more or less slow in its appearance, is constant on the tongue, in the mouth, on the nose. The forehead and the cranium have almost always a decidedly elevated temperature. Warmth is quickly reëstablished in the belly, sufficiently so in the lower extremities, much less so in the upper extremities. This chill is the most important indication of the general condition of the patient. From the moment that the tongue recovers its heat, we have a right, notwithstanding the persistence of all the other symptoms, to assume the commencement of a change. The coldness of the limbs is deceitful, for it is possible to employ and to keep up an artificial extra-vital heat; that of the tongue is decisive and never deceives. I except only a single case, which I may be excused for alluding to, where the patient has taken ice.

The cyanosis has seemed to me to have less intensity; it is often distributed very unequally, and does not affect by preference the extremities. In many patients it appears in the form of bluish patches, ecchymotic, not disappearing under the finger, occupying sometimes the thighs, sometimes the penis, never the belly nor the chest; so extensive in some places that one might believe it to be a traumatic extravasation of blood. The most brisk flagellation, which produces a violet-rose color in the parts least affected, causes no change in these ecchymoses. The face gives no measure of the general cyanosis, which does not correspond on the other hand to the intensity of the coldness.

The skin is sometimes dry, sometimes covered with cold sweat, which ordinarily appears only at intervals.

The muscles have no characteristic flaccidity, contracting slowly when they are pinched or struck by the hand. The cramps are confined almost entirely to the calves, rarely affecting the muscles of other parts of the body. They are generally of moderate severity, occurring only at long intervals, and above all do not occur after the first period of the disease. Patients in whom the pain is so severe as to force them to cry out, are the exception. The visible muscular contraction is not very great. I do not remember to have witnessed an epidemic in which the patients have relatively suffered so little from this painful complication. In many grave cases, terminating fatally, the patients have declared that they have been little or not at all inconvenienced by the cramps.

During the cold stage the arterial circulation is more or less impeded. The heart seems to pulsate deeply, the pulse in the radials cannot be felt, sometimes not even in the groin. At other times the pulse is regular, but always rather retarded than accelerated. The

respiration is equally variable—sighing, anxious or almost normal, without revealing by auscultation, either in this or any other stage, any anomaly in the respiratory murmur.

The gastro-intestinal affection is entirely in accordance with the standard description. The vomiting, however, is far from having the invariable uniformity of the alvine evacuations. Many of the cases vomit only at the commencement of the attack; others, less numerous, are tormented by repeated vomiting, but which, even in extreme cases, is not to be classed among the number of symptoms the most indomitable. I have not seen a single patient of whom it might be said that the persistence of vomiting had rendered therapeutic intervention fruitless.

The serous diarrhœa, limpid, mixed with flocculi, is identical in almost all cases. Sometimes, in place of the granules which have been compared to grains of rice, the patients pass semi-coagulated, albuminous masses. In three or four cases the serous diarrhœa has been bloody, like lees of wine, from the first; none of these patients recovered, or showed any sign of even temporary amelioration. As in the slow form of the disease, the alvine evacuations may cease suddenly, without having changed their character, and, after one discharge exclusively serous, constipation is abruptly established, or the diarrhœa is gradually modified and approaches more and more to the normal condition. The second mode is much the most favorable.

The diarrhœa, whether it is suspended or not, does not give an exact measure of the severity of the disease.

The urine is suppressed and cannot be secreted anew, until long after the return of warmth and the cessation of the specific diarrhœa.

[To be continued.]

CLINICAL LECTURES ON AMBLYOPIA AND AMAUROSIS, BY PROF. A. von GRAEFE.

[Continued from page 440.]

Case VI.—*Blindness of each Eye of sudden occurrence, with incomplete Restoration of Vision on one side, probably caused by a Basilar Tumor.*

Friedrich R., a tailor, 32 years old, pale and bearing evidence of insufficient nourishment, comes to consult us for a recent loss of vision of the right eye and weakness of the left. The functional examination reveals the absence of quantitative perception of light on the right side, diminution of the acuteness of vision to $\frac{1}{2}$ on the left, and (by lamplight) indistinctness of eccentric vision in the outer and lower quadrant of the field. The pupil of the blind right eye is entirely insensible to the influx of light; contracts energetically, however, when the left eye is illuminated, a circumstance which

excludes any suspicion of simulation. The optic papilla of each side, as well as the size of the retinal vessels, is entirely normal. The history of the case reveals the fact that the patient during the last few years had had several severe attacks of vertigo, which had twice been so intense as to cause loss of consciousness, and once had induced a temporary weakness of the left arm. The mind remained unaffected, headache occurred only from time to time and very lightly, and the cranium was in no part sensitive. The eyes had been entirely unaffected up to within fourteen days; one morning, however, the patient, while at his work, observed a limitation of the right field of vision, objects far removed to one side seeming entirely to disappear. This obscuration advanced from the temporal side inwards with much regularity, so that on the third day objects at which the right eye was directed seemed situated at the edge of the defective portion. On the sixth day only a faint glimmer of light existed on the nasal side. The day afterwards all perception of light had disappeared. It is only a few days since a decrease in the acuteness of vision of the left eye has been observed, and with this is particularly connected a great sensitiveness to light, indicated by the, so to speak, dazzled manner of the patient.

The method of development of the blindness in the right eye has been emphatically unusual. It differs in its rapid course (in all, six days) from the amaurosis dependent on atrophy of the optic nerve; on the other hand, from anæsthesia of the retina (Case VII.)—to which otherwise the sensitive condition of the patient offers a strong provocation—in the steady advance of the failure in the field of vision, so appreciable to the patient. The measured advance of the contraction of the field of vision naturally gives rise to the supposition of a material agency at work on the trunk of the optic nerve, spreading gradually from the inner to the outer fibres, and inasmuch as a similar effect begins to be produced on the second eye, and no symptoms of a diffused cerebral affection or one existing on both sides are apparent, we must locate this agency at the base of the cranium. The previous attacks that the patient has had are in perfect harmony with the theory of a basilar neoplasma. If the development of such a formation be slow, there may be circumstances under which the adjacent nerves and the cerebrum itself may become adapted to it, allowing of its remaining entirely latent. Compression of the basilar vessels and the derangements of cerebral circulation dependent thereon—for example, faint-like or epileptiform attacks, with, perhaps, interruption of the arterial circulation and transient hemiplegia—occur then only periodically and under the additional influence of accidental causes, and the whole aspect of the disease may for a long time be confined to these symptoms. Paralysis of the cerebral nerves takes place when either the morbid growth, as such, cuts off the nerves, or when the nerve connective-tissue undergoes an irritative process, or when too great an amount

of pressure gives rise to compression of the nutrient vessels, and thereby to a loss of nerve-substance. One of these processes must have recently allied itself to the existing difficulty and have affected the optic nerves. The normal condition of all the other nerves, especially of the branches of the oculomotorius, warrants us in placing the morbid growth in front of the chiasma and between the optic-nerve trunks, from which focus its action would first be apparent on the crucial fibres (inner retinal portion). Considering, however, the deficient character of the symptoms, the theory of such a new growth may be set down as the more probable diagnosis. We meet with cases of defined basilar periostitis which, contrary to all expectation, induce no pain, and where the extremely gradual development of the symptoms simulates the progress of a tumor. Finally, there are forms of paralysis which seem to abundantly support the theory of a basilar tumor, but where there is an absolute failure of anatomical confirmation. More prolonged observation will, perhaps, invest such a supposition with increased certainty.

We must give a prognosis unfavorable, to be sure, but not as decided, as regards the vision, as we should in ordinary atrophy. The more the case differs in its aspect from those of frequent occurrence and subjected to the light of abundant experience, the more cautious must we be in our prognostic utterances. If the cause be really a tumor, the final result must be fatal, but a partial restoration of vision is by no means impossible, considering the short duration of the blindness. This would only be the fact in a case where the tumor has really cut off the optic nerve. If the loss of conductive power in the nerves is attributable to inflammatory action in the connective tissue or compression of the nutrient vessels, the processes may be partially transitory and give way to some amount of change. Thus in the case of tumors, in spite of their constant increase, we not infrequently observe an amelioration in certain classes of paralytic symptoms.* For the present it is natural to suppose that the limitation of the left field of vision will continue to progressively develope; the result must show, however, whether it will lead to entire loss of sight in this eye or only to temporal hemiopia.

The patient was again presented, eight days after his admission; the contraction of the left field of vision had meanwhile become more and more extended, following much the same course as did the right, and within a day the patient had been deprived of all perception of light in this second eye, too, becoming, consequently, stone-blind. Moreover, of late, a progressive failure of the sense of smell had taken place, not amounting, however, to complete loss of smell. An ophthalmoscopic examination gives a negative result with regard to the papilla. In the interval a slight attack of faintness had been noted.

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* See the instructive case published by Sämisch in the February number of this year's magazine, pp. 51–55.

The patient remained six days in this state of complete blindness, at the end of which time some perception of light began to manifest itself in the left eye, as well as a gradual restoration of the left field of vision, beginning on the nasal side. Six weeks after the case was first presented, the field of vision of this eye had attained a nearly normal development; the acuteness of vision, however, had only reached $\frac{1}{10}$, and eccentric vision in the neighborhood of the temporal edge remained indistinct. This improvement and simultaneous increase of the sense of smell followed the administration of the lactate of zinc in increasing doses; was probably, however, not connected with this agent, to which, in cases of idiopathic retinal hyperæsthesia (see Case VII.) I am highly partial. The right eye remains entirely blind, and its papilla now offers clear evidence of atrophic degeneration.

The last recorded condition of things seems now (a month later) to remain unaltered. That the partial restoration of vision on the left side by no means detracts from our original diagnostic supposition of a basilar neoplasma, has already been settled. The patient, too, continues pale and exceedingly decrepid; the left papilla, in its turn, commences gradually to exhibit traces of atrophic degeneration, without, however, any reduction in the partially-recovered vision.

Case VII.—*Anæsthesia of the Retina, with Concentric Limitation of the Field of Vision; Quick Recovery.*

Carl S., a delicate boy, 10 years of age, is brought to the clinique for deranged vision of the right eye and twitching of the face. The right eye is extremely intolerant of light, it being hardly in his power to hold it open when exposed to strong daylight; on softening the light, however, and neutralizing a hyperopia $\frac{1}{30}$, the acuteness of vision is found to be $\frac{1}{3}$; the field of vision is concentrically, though irregularly limited, rather more downwards than in any other direction. Its angle of aperture in the vertical direction is about 40°; in the horizontal, 50°. By lamplight, even though limited in amount, no diminution in this diameter of the field of vision is noticed; in fact, it rather increases, and this, too, is the case when the patient is made to look by daylight through dark-blue glasses (shade No. 8). *In every direction phosphenes are producible.* It is particularly striking that pressure behind the upper part of the ora serrata at once brings out the lower phosphene, although the transmission of impressions is most deranged in this direction. The phosphene in question is projected at least thirty degrees below the edge of the contracted field of vision. The result of the ophthalmoscopic examination is entirely negative. The acuteness and field of vision of the left eye are normal. On the right half of the face periodic twitchings of separate muscles occur, particularly of the zygomatici and levatores; which increase, it is true, when the admission of bright light causes the right eye to be closed, but last even

when it is entirely shaded. The interval between their occurrence is seldom more than half a minute, the twitchings themselves being slight and lasting only a few seconds.

With the exception of some nervous irritability, the patient's health was always good. Three weeks before he presented himself he was, while walking in the country, caught in a thunder storm, and much frightened at a tree, a short distance from him, being struck by lightning. The next morning, the derangement of vision and the twitchings were both observed.

The presentation of these particulars was coupled with the following remarks:—We have here such a case of partial anæsthesia of the retina, especially of its peripheric zone, as often occurs in excitable children and nervous or hysterical women, and inspires even experienced ophthalmic surgeons with an erroneous fear of progressive amaurosis. The particular cause seems peculiar in such cases; it is, however, probable that we have here simply to regard the accompanying mental impression. Such forms of anæsthesia, coupled sometimes with a loss of cutaneous sensibility to pain, or, as in the present instance, with twitchings, may be seen to particularly occur in those cases where general excitability has acted as the predisposing mental agitation, as the immediate cause. They therefore particularly affect individuals of excitable temperament, the subjects of anæmia, those convalescing from severe diseases—for example, children getting over scarlet fever, measles and typhoid, whose power of resistance has not yet become developed. In comparing the characteristic signs in these cases with those in amaurotic affections, we shall find the former as follows:—

(1.) Only a slight diminution of the central acuteness of vision, seldom passing the bounds of $\frac{1}{3}$ or $\frac{1}{4}$, while there exists an important anomaly in the confines of the field of vision, generally consisting in concentric, irregular limitation.

(2.) A development either sudden or reaching its acme in a few hours or days.

(3.) Retention of the phosphenes at points corresponding to these portions of the retina where there is no perception of light, showing a loss of connection between the rods and fibres, dependent on a local cause.

(4.) Simultaneous hyperæsthesia of the retina and the active character of the retinal difficulty thereon dependent, in consequence of which vision either remains as good or improves on using dark-blue glasses or in a dim light, circumstances which in general cause a diminution of vision.

(5.) The age and sex of the patient. It is well known that the amaurotic affections dependent on atrophy of the optic nerve—leaving out of the question congenital states as well as further intracranial derangements, manifesting their existence by palpable symptoms—very seldom occur with children and, in the case of adults, are

infinitely more frequent with men than women. In this form of retinal anæsthesia the opposite is the case. According to my observations it affects almost exclusively women and children, and in the exceptional cases where men were seized — a thing that has happened only twice in my experience — the subjects were those where temperament and bodily constitution approached either the feminine type or that of the child.

Finally the predisposing and accompanying circumstances are of importance, because under the first head we mostly meet with mental impressions, under the second with a loss of cutaneous sensibility and local affections of the motory system. In our own case a preliminary examination of the sensitiveness of the skin has given only a negative result. On the other hand the peculiar facial affection is completely characteristic.

As a whole these points of differential diagnosis are not without value, though taken separately the departures from them may be numerous. And first we have those exceptional cases in which (contrary to No. 1) the acuteness as well as field of vision suffers an unusual diminution. I can on this occasion refer to two in which blindness had nearly been produced. An unfavorable prognosis might have been given, still the other symptoms seemed to justify me in speaking encouragingly, and the usual treatment was followed by entire recovery. It is possible that certain cases of sudden and entire blindness might also be included in this category; it is not, however, in our power to establish rules of differential diagnosis between them and other incurable forms.

In the case of a boy 8 years of age a very remarkable phenomenon was observed. After a concentric limitation of the field of vision had lasted some time, and all other symptoms had decidedly indicated that the case belonged to the foregoing category, the hyperæsthesia of the retina very much increased, and the next day there took place entire restoration of the periphery of the field of vision, accompanied, however, in each eye by a large central scotoma, diminishing the acuteness of vision from $\frac{1}{2}$ to $\frac{1}{40}$ (eccentric). This turn so surprised me that I at first refused credence to the statement, until over-persuaded by measuring the scotoma at various distances and by following up the case. The boy was convalescent from the measles, always delicate and possessed much nervous excitability; the usual treatment brought about his cure.

The amount, too, of the accompanying retinal hyperæsthesia varies extremely, being often extremely marked in the case of hysterical patients, while children between 6 and 14 years of age, the most frequent subjects of the disease, may have only a moderate feeling of being dazzled. The affection of one side only makes the above-cited case exceptional; the disease almost always occurs on both sides, though it may be to a different extent. The fact that in cases of recent occurrence the optic papilla retains its normal appearance is of course of no value as regards the differential diagnosis, inasmuch as this is also applicable to cases of a serious nature that have existed but a short time (Case VI.). On the other hand it is remarkable that even where the difficulty has existed some time and not

been treated, the papilla may retain its normal redness, transparency and superficies.

It follows from what has been said that we hold the prognosis in these cases of retinal anæsthesia to be favorable. An entire cure is generally effected within a few weeks; occasionally the disease remains for some time at a certain height till the advent of convalescence, and only in a few cases have I observed the cure notwithstanding a long delay to be incomplete, owing to the but partial disappearance of the peripheric contraction of the field of vision and of the hyperæsthesia — of the last, especially, where (as in cases of hysteria) the general health could not be established on a firm foundation. I have never observed these cases to result in amaurotic blindness.

As regards the question of treatment much stress is first of all to be laid on the regulation of the allowance of light. The good results that have been said to follow the entire and methodic deprivation of light in amaurotic affections may, I think, be attributed to the fact that the cases were either those in point or else of the nature of hemeralopia, a state in many respects analogous, different though it be with regard to the retinal torpor. In progressive atrophy the light, it is true, should be softened in order to remove a cause that may accelerate blindness; this is, however, never observed to produce a remarkably curative effect. It is my custom to first keep those affected with anæsthesia of the retina for several days in a completely darkened chamber, and then, during perhaps 6 or 8 days, to allow a gradual increase in the amount of light. Later, when the patients are allowed to go out, blue glasses of different shades, varying according to the degree of light they are exposed to, are to be given them. The importance of this portion of the treatment varies directly with the amount of retinal hyperæsthesia.

Among medicinal agents I place my chief reliance on the internal administration of the preparations of zinc in increasing doses, following the method recommended by Jaksch in the treatment of a loss of cutaneous sensibility. I formerly frequently employed tartar emetic in nauseating doses, and generally obtained a satisfactory result; this plan, however, is far more disagreeable to the patient than the treatment by zinc, and where the digestion is affected cannot be used indiscriminately; I therefore counsel that it be had recourse to only when the use of zinc has failed to produce an impression. If improvement has once commenced, I go over to mild tonics, administer iron, give aromatic and salt baths and cold sponging. All this treatment must have reference to the state of the general health in the case before us. It is indubitable that a well-balanced mind exercises a decided influence. As the passions often furnish the exciting cause, so have I seen their indulgence followed by a relapse in many cases where a cure was already in progress. Setting the patient at ease as to the true nature of the affection,

often brings about the favorable crisis. During treatment the exercise of the accommodation must be entirely forbidden; on the other hand when the dark chamber can once be dispensed with, much time should be spent in the open air. In this form of disease I must caution against the abstraction of blood, as well as all remedies which reduce the system, excite the nerves or interrupt sleep. Their employment is not only followed by an immediate change for the worse, but the disease developes a more obstinate character.

The boy was subjected to such a course of treatment, the light being regulated and zinc administered (lactate of zinc, at first gr. iss., afterwards gr. v. a day). Twelve days after his admission the twitchings of the right half of the face had been reduced to a minimum, the acuteness of vision had increased to more than $\frac{2}{3}$. The limitation of the field of vision outwards, inwards, and upwards had disappeared, and was only perceptible downwards; the retinal hyperæsthesia had diminished, but was not entirely obviated. The patient was now ordered iron and cold spongings, and, when next shown at the clinique, the ability to use the eyes freely and a *restitutio ad integrum* were demonstrated, the cure having taken in all four weeks.

[To be concluded.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JANUARY 4, 1866.

The Sanitary Inspection of the City.—It will be remembered that we published, not long since, some resolutions and orders adopted by the municipal government relating to a sanitary inspection of Boston, which served at least to quiet the fears of the people in view of the possible speedy approach of cholera, and were satisfactory so far as they were a recognition on the part of the city authorities of its bad sanitary condition and of the necessity of immediate action to correct it. To the general, or to the unreflecting medical reader they undoubtedly appeared to be all that the occasion called for—a sure promise of a healthy and clean city in future, and to the extent of human agency an insurance against pestilence. They were, in fact, quoted by medical journals in other cities as an example worthy of imitation at home. The measures adopted, however, could not stand the test of a closer and practical scrutiny, for their execution was entrusted to an entirely incompetent agent, namely, the police. With due respect for the efficiency and honesty of this body of men, what can they know about such an important, such a difficult subject as sanitary visitation; what, indeed, can the Board of Aldermen know of it, to entrust it to such an agency? "They shall report all cases where the drains, cesspools or privies are in a state injurious to health." Does any one for a moment suppose that a patrolman understands enough of the physical and mechanical principles upon which proper

ventilation and drainage are based to conduct such an inquiry? It is evident enough that an examination thus conducted, instead of being "thorough and systematic," would be of the most superficial and dangerous character. A few bad smells, a few dirty houses might be attended to, but that would be the only practical result of such well-meaning resolutions.

More than two months have passed since they were adopted, and what has been really accomplished by them? We fear that the sanitary condition of our streets and houses is as unsatisfactory now as then. We doubt if a single inspection has been made of a dwelling house in the better parts of the city. There may have been inquiries in some such localities at the door, possibly consultations with servants, about the sanitary condition of the underground arrangements, but no inspection of "*the whole city.*" Even in those places where sights and smells were of a character to be fully appreciated by such a commission, the nuisances have not in many cases been removed, even after the attention of its higher officers has been repeatedly directed to them.

It is not strange, therefore, that with the Board of Aldermen a doubt should have subsequently arisen as to the wisdom of their action in this matter, and that they should have sought the advice of the Consulting Physicians. This was given in the following report, which will commend itself, we are sure, to all our readers. There can be no doubt of the necessity of a thoroughly scientific, sanitary inspection of the city. It should be placed under the direction of and made by physicians, the only competent persons for such work. A chart should be made by wards or districts, upon which the sanitary condition of every house, alley and street in the city, and the public and private systems of drainage and water-supply could be seen at a glance.

The conclusion of the report contains the views of the Board upon the question of quarantine and cholera, but as this has been recently published in the JOURNAL, it is omitted in this connection.

BOSTON, NOV. 11, 1865.

To the Mayor and Aldermen of the City of Boston:—

In reply to the following questions, submitted by His Honor the Mayor and the Board of Aldermen, to the Consulting Physicians, viz.:—

1. Is what has been done and is now doing by the City Government, towards purifying and cleansing the city, in their opinion, sufficient to prevent the invasion and extension of Asiatic Cholera, so far as it can be effected by these sanitary measures?

2. Is it advisable that one or more hospitals should be provided for the reception and treatment of cholera patients, and where located?

They respectfully

REPORT:

That, so far as they have been informed of the manner and extent of the investigation made by those appointed to examine into the sanitary condition of the city, it appears to them wholly inadequate to accomplish the end designed. It is understood, from the statement made by the Superintendent of the Board of Health, that only the northern part of the city, and a portion of the south, have been examined and reports made on their condition; and, also, that a report has been made concerning a well-known nuisance in Charles Street, reported as such by the City Physician in 1859, and occasionally, ever since, but still remaining in increased degree; thus leaving out a large extent of densely occupied land in the west and in the central parts of the city. Even if this examination had been faithfully and intelligently done, it is manifest that it can lead only to a par-

tial and limited purification. But from the information obtained by individuals of this Board, they cannot but fear that the sanitary survey, made into the condition of many foul places, has not been correctly reported. It was stated that the mode adopted by the city for the investigation has been as follows, viz.: that a police officer should make inquiry at each house, of the state of the drains, privies, &c., on the premises; and, on his report, that the Superintendent of the Board of Health should make a subsequent visit, and order the nuisance, if any such had been reported, to be removed; and a third visitor to the premises from the Board of Health should see that the nuisance had been abated. Now, it is plain, that if a policeman should call at any house and inquire, with all politeness, into the condition of the premises, as to the drains, &c., and should be informed that they were all in a satisfactory condition, there would be no subsequent visit by the health officer, and no actual examination of the premises would have been made. The Medical Board apprehend that in some instances this has been the case. Now, although there is such a vast difference in the sensible aspect and in the real condition between the large and cleanly houses of the affluent and the small and dirty dwellings of the poor, yet even in the best kept mansions of the wealthy there may be unseen or unnoticed causes at work, calculated to produce sickness, not observed till seen in their evil effects. Thus sometimes a family in very good circumstances is made most unexpectedly to suffer from the severe sickness of several of the household, and even by the death of one or more of its members, from the effect of local but unnoticed pestilential causes. Every house, therefore, should be visited, not only at the outer door, but examined with scrutiny within and throughout.

The Medical Board cannot but think that so important a subject as that of a sanitary investigation has not been committed to those best able to make it. Without the least disparagement to the police or to the gentlemen of the Board of Health, to whom this arduous duty has been assigned, in addition to their other engagements in city affairs, the Physicians are of the opinion that such an examination could only be effectually done by an independent committee, under the personal inspection of a medical board. If the city was divided into districts, with a visiting committee for each district, having a physician attached, it might be hoped that the work would be faithfully and fully accomplished. It also appears that many of the most prominent nuisances, such as that in Charles Street, and others at the South End, remain unremoved; and these and similar places cannot but be regarded as pestilential localities. The Board of Physicians, therefore, in reply to the first inquiry of the Board of Aldermen, say that there is much more to be done, and more strictly done, to improve the sanitary condition of the city, and prepare it for the inevitable visit of the cholera.

In answer to the second inquiry, as to the necessity and location of cholera hospitals, the Physicians reply: that, from the experience of all of the medical gentlemen, in former invasions of the cholera, they are of the opinion that several hospitals, located in different parts of the city, should be prepared, and will be found exceedingly useful, as at former periods. The disease, when fully formed, is too rapid in its course, and too severe, to admit of the removal of a patient out of the city, or to a distant part within it. Assistance, to be availing in this disease, must be close at hand, and promptly rendered. It is recommended that arrangements should be made at once for such establishments, although it is not thought that there is danger of its immediate appearance in this community. A suggestion having been made to the Medical Board, that it might be expedient that they should ascertain what were the legal powers of the City Government to accomplish what they might advise as sanitary measures, they acknowledge that it appears to them that the statutes do not invest the City Officers with all requisite power; but they also think that a full and vigilant exercise of such power as they have would enable them to accomplish much more than has been done, if not all that is desirable. This, however, must be left for legal decision.

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The Consulting Physicians recommend that the orders lately passed by the Board of Aldermen be so amended that the sanitary survey be put under the direction of the City Physician, and that he have authority to call upon the Chief

of the Police, Superintendent of Internal Health, and the Superintendent of Sewers, for such assistance as he requires for the removal of nuisances.

JOHN JEFFRIES,
WINSLOW LEWIS,
HENRY G. CLARK,
D. HUMPHREYS STORER,
CHAS E. BUCKINGHAM,
Consulting Physicians.

DEATH OF DR. ELISHA HUNTINGTON.—The following account of the life and death of Dr. Huntington is taken from the *Lowell Courier* of December 18th :—

No individual was so well known in our community as Dr. Huntington. Few persons were ever called upon to occupy so many different positions before the public as himself. His life is closely interwoven with the whole history of Lowell, he having come here in 1824. He was born in Topsfield, Essex County, April 9th, 1796. His father, Rev. Asahel Huntington, was pastor of the church there about twenty-five years, dying in 1813. His mother was the daughter of Dr. Elisha Lord, a distinguished physician in Pomfret, Ct., and was a woman of superior mind and moral worth. While the son received the name of the grandfather, he inherited largely the qualities of the mother. He entered Dartmouth College at the age of 15. He took his medical degree at Yale College in 1823, and commenced immediately the practice of medicine in Lowell. The first and last office he held was that of a member of the School Committee—having been elected in 1826, and re-elected in 1831, '32, '33, when Lowell was a town ; and, then again re-elected in 1860 and 1862, terminating at the close of 1864.

In 1833 and '34, he was one of the Selectmen of Lowell, and after its incorporation as a city was a member of the Common Council, in 1837–8–9, serving two years as President of that body. In 1839 he was promoted from the Presidency of the Council to the Mayoralty, succeeding the Hon. Luther Lawrence, who died soon after entering upon the duties of the office. He was re-elected Mayor in 1840, '41, '44, '45, '52, '56 and '58, when he positively refused the use of his name again for that office. He was an Alderman in 1847, '53 and '54.

In 1853 Dr. Huntington was chosen Lieutentant-Governor of the State, having been elected upon the Whig ticket with Gov. Clifford ; but he refused the use of his name as a candidate for re-election the following year. He has been a member for several years of the Board of Overseers of Harvard College : was an Inspector for three years of the State Almshouse at Tewksbury, and has been its Consulting Physician from the establishment of the Institution. He has been for some time Chairman of the Library as well as of the Lecture Committee of the Mechanics' Association, and but a few weeks since introduced to the audience George W. Curtis, Esq., which was his last attendance at these lectures. The hall in which these lectures are held, called "Huntington Hall," will transmit his name to successive generations.

Notwithstanding the occupancy of all these public positions, Dr. Huntington applied himself closely to the duties of his profession. It was in the capacity of a physician that he was most and best known to large numbers of our citizens. Starting with the early settlement

of the city, he has had here an extensive practice for over forty years. Many families never employed any other physician. At times he did considerable business in the adjoining towns. While he never made any pretensions to superior skill, or devoted special attention to any particular department of medicine, he has always sustained himself in professional business, to an unusual degree, both commanding the confidence of the community as well as the respect of his medical brethren. He filled the office of President of the District Medical Society for several years, and was also for one or two years President of the Massachusetts Medical Society. In 1856 he delivered and published an address upon the life, character and writings of his old friend, Dr. Elisha Bartlett. This work was a well written production, and was very favorably received by the public. This, with his addresses as mayor, which were always finished specimens of composition, constitute the only printed communications he ever made to the public. His uniform kindness to the poor and needy, not only while acting as mayor, but especially in his professional duties, will long be remembered.

When able he was always ready to answer the calls of the poor without much regard to remuneration. No person in this city has ever spent so much time, labor and pains in relieving the sick poor as Dr. Huntington. The thankful remembrance of the poor, as well as the reward on High for such services are more valuable than silver and gold. No individual will be so much missed among all classes in our community as Dr. Huntington. Where is the person who could practise medicine over forty years in the same place, and occupy at the same time so many prominent positions, without creating greater prejudices, or making enemies — if indeed he ever had any ?

Nature endowed Dr. Huntington with an organization remarkably favorable for public life — a *temperament* and *brain well balanced.* This was the great secret of his success. This was the foundation of the leading qualities in his character.

His kindness of heart, his genial good nature, his modest deportment, his nice sense of propriety, his fine literary taste and fondness for books, combined with natural talents and mental attainments of a high order, constituted leading elements in his character. But in this community, where he was so well known, any detailed analysis or description of his character seems really unnecessary. His deeds are his best eulogy.

A special meeting of the Fellows of the Middlesex North District Medical Society was held on Friday, and largely attended by the city members and also from the neighboring towns, for the purpose of giving expression to their grief at the loss by death of their lamented associate, the late Dr. Huntington.

Dr. Jewett, Vice President, occupied the chair, who stated, in most appropriate words, the object of the meeting.

Dr. Green made a full and interesting report of his last illness.

Dr. Savory followed in appropriate and judicious terms, descriptive of the many worthy traits in Dr. H.'s character and life.

Dr. Edwards, of North Chelmsford, made, in a most feeling manner, allusions to his long and intimate relations to the deceased.

Upon motion of Dr. Savory, a committee was ordered to be ap-

pointed by the chair, to propose and draft resolutions to be presented to the Society at their next regular meeting. The chair appointed as this committee, Drs. Green and Savory of Lowell, and Dr. Bartlett of Chelmsford.

The Society then voted to attend the funeral in a body.

United States Army Surgical Reports.—The Surgeon-General has just published Circular Number Six for the information of the medical officers of the army. The circular comprises reports from Brevet Lieutenant-Colonel George A. Otis, U. S. Volunteers, having charge of the surgical, and Brevet Major J. J. Woodward, U. S. Army, having charge of the medical history of the rebellion. From the surgical report it appears that complete registers of the wounded are in course of preparation, in which over eighty-seven thousand cases of wounds and seventeen thousand surgical operations have been recorded up to September, 1865, the work of registration being still very far from complete. The material collected is enormous, and embraces a mass of facts which on many subjects exceed in number and value all previous observations in this field.

In the late war the monthly reports from a little more than half the regiments in the field, give for the year ending June 30, 1862, an aggregate of 17,496 gun-shot wounds. The reports from rather more than three fourths of the regiments for the year ending June 30, 1863, give a total of 55,974 gun shot wounds. The battle-field lists of wounded for the years 1864–65, include over 114,000 names.

The surgical specimens of the Army Medical Museum number 5480, and not only in specimens of recent injuries, but in illustration of reparative processes after injury, of morbid processes, of the results of operations and of surgical apparatus and appliances, this institution is richer, numerically at least, than the medico-military museums of France or Great Britain.

The medical staff that served in the late war was composed of a Surgeon-General, one Assistant Surgeon-General and Medical Inspector-General, 16 medical inspectors, 170 surgeons and assistant surgeons of the regular army, 362 volunteer staff surgeons and assistant surgeons, 3000 regimental surgeons and assistant surgeons of volunteers, 2500 acting assistant surgeons, or physicians serving under contract, and six medical storekeepers.

The second report, by Major Woodward, contains an outline of the material collected for the medical branch of the history. It embraces all the information possible with regard to the sickness and mortality of the army during the war, and especially whatever related to the nature and causes of those afflictions which were the chief occasion of death and disability. The mortality from disease alone was forty-eight and seven-tenths per one thousand of mean strength for the first year of the war, and sixty-five and two-tenths for the second. The total number of deaths from disease reported for the first year was 14,183, and 42,010 for the second. These figures do not include those who died while absent as prisoners of war or after having been discharged the service for disability. The number constantly sick was about ten per cent. of the strength. The total number of cases treated by the medical department, including wounds and injuries, was 878,918

during the first year, and 171,183 during the second. The most fatal disease was camp fever, of which there were 213,260 cases, and 19,459 deaths, during the two years. Next come diarrhœa and dysentery, 725,675 cases and 11,560 deaths. Then inflammation of the respiratory organs, 304,284 cases and 8090 deaths. Venereal diseases were much less frequent than the experience of other armies would have led us to expect, still eighty-four men in every thousand suffered during the first year, and sixty-five during the second—the total number of cases being over thirty-nine thousand. Twenty-eight thousand six hundred and twenty discharges for disability were reported during the first year, or about nine per cent. of the strength of the army.

It appears that at the medium there were 202 general hospitals, with 136,894 beds for patients. During the war over a million patients were treated in these, of whom but one in twelve died. Dr. Woodward says, never before in the history of the world has the mortality in military hospitals been so small, and never have such establishments so completely escaped from diseases generated within their walls. Complete reports for the first year of the war from troops in the field and in garrison, represent an average strength constantly present during the year of 281,117 men ; in hospital constantly present, 9759 men ; total, 290,936, among whom were 14,183 deaths from disease. The number of deaths recorded is much less than the real number, as it does not include prisoners of war and other absentees. For the second year in field and garrison, 598,821 ; in hospital, 45,687 ; total, 644,508 ; of whom there were 42,010 deaths from disease. These mortality rates from disease are much smaller than is usual with armies in a time of war, and are much less than those of the allied armies in the Crimea, or of our own army in the Mexican war. The proportion of deaths from disease for the third and fourth years was rather diminished.—*Despatch to Daily Advertiser.*

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, December 30th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	28	37	65
Ave. mortality of corresponding weeks for ten years, 1853—1863	43.6	40.1	83.7
Average corrected to increased population - - - -	00	00	91.21
Death of persons above 90 - - - - - - - -		1	1

Communications Received.—Cases in Country Practice, No. IX.—Case of Fistula in Ano.

Married,—In Ellington, Conn., Dec. 20th, H. L. Whitman, M.D., of Des Moines, Iowa, to Miss Ellen Thompson, of the former place.

Deaths in Boston for the week ending Saturday noon, December 30th, 65. Males, 28—Females 37. Accident, 1—congestion of the brain, 2—disease of the brain, 1—bronchitis, 5—burns, 1—cancer, 1—consumption, 14—convulsions, 3—croup, 1—diarrhœa, 1—diphtheria, 2—dropsy, 1—dropsy of the brain, 1—dysentery, 1—gastritis, 1—disease of the heart, 2—infantile disease, 1—influenza, 1—insanity, 1—intemperance, 1—disease of the kidneys, 4—disease of the liver, 1—congestion of the lungs, 1—inflammation of the lungs, 1—marasmus, 3—old age, 1—paralysis, 2—peritonitis, 2—pleurisy, 1—premature birth, 2—suicide, 1—unknown, 4.

Under 5 years of age, 24—between 5 and 20 years, 6—between 20 and 40 years, 13—between 40 and 60 years, 7—above 60 years, 15. Born in the United States, 44—Ireland, 16—other places, 5.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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CASES IN COUNTRY PRACTICE.—No. IX.

BY JOHN ELLIS BLAKE, M.D., OF MIDDLETOWN, CONN.

[Communicated for the Boston Medical and Surgical Journal.—Continued from Vol. Lxvii., page 91.]

CASE I.—*Strangulated Inguinal Hernia.*—I was called by Dr. M. C. Hazen, of Haddam, Conn., to visit, in consultation with him, Mr. E. L., a case of old inguinal hernia, which up to this time he had generally been able to reduce himself, or which at any rate (at any previous protrusion) had always yielded to the proper employment of taxis. Strangulation had existed many hours before Dr. Hazen was called, and by the time I saw him his symptoms were alarmingly urgent. He was an old man, I should judge about 70, and his prolonged distress was evidently telling upon him, and could not be much longer endured. It was decided that as the taxis carefully employed by Dr. H. had not succeeded, the patient should be fully etherized, and the operation for the relief of the strangulation be at once undertaken. No attempts at reduction being found of any use, I proceeded to operate. The hernia was a very large one, and having existed many years the rings were nearly in line, making it appear like a direct hernia, although this was not the case. The sac contained quite a quantity of serum, as is usual. The constriction at the neck was exceedingly tight, and the coils of intestine, in consequence, quite black from strangulation. I have since thought that this case might have been operated on externally to the sac, perhaps, and successfully. At the time, however, I felt better satisfied to open it, and to know that all was free. The operation was conducted in the usual way, and presented no unusual difficulties other than those arising from the surroundings of the patient, who was a parsimonious old man, and lived almost like a hermit in one corner of a room in his miserable house. The room, the bed, and the patient were curiosities of dirtiness. A lamp, procured through the kindness of a neighbor, gave a better light for the operation than "tallow dips" (since it unfortunately had to be done at night), but was poor enough at best, and caused me to think how great a convenience, especially to an operator in the country, a good reflecting lamp

would be, small enough to be really portable, at once compact, easily arranged, and with no parts easily broken. The principle of the "Davy safety lamp," if it could be applied to it, would render the use of sulphuric ether about a patient's bedside at night less hazardous. There was no need of my seeing this patient again, as under the judicious care of Dr. Hazen he made a good recovery, despite all he had undergone, his age, his dirt, and his squalid surroundings.

Case II.—*Strangulated Femoral Hernia.*—I was called to Leesville, Conn., by Dr. Edmands, to see Mrs. W., a patient of his, with a femoral hernia of long standing, always reducible before this, though sometimes with great difficulty. On this account, as I understand, the attending physician was less alarmed at the failure of his first efforts with taxis. On this occasion the patient's symptoms were such as to render any further delay hazardous. She was in the greatest distress, tossing from side to side, and vomiting, or trying to do so, incessantly. The odor of the matters so evacuated had a fæcal character plainly perceptible. I had no confidence in the result of further efforts to reduce the hernia by taxis, since it had failed after patient trial in the hands of Dr. Edmands; yet the patient being fully etherized, I made a few attempts so to do, but failed, as was to be expected. The operation was accordingly resorted to. The line of the primary incision was that advised by Dr. Gay in his work on "Femoral Rupture," well to the *inside* of the tumor, as close to the central line of the pubis as practicable. I think the operation is much facilitated by beginning in this way, instead of making the incision over the apex of the hernia, as is sometimes done. The sac being reached, its contents, when opened, were found to consist largely of omentum, as had been expected. Below this were two coils of intestine, quite black, but not as yet sloughy. The constriction being divided, the whole was returned to the abdomen. This patient made a good recovery. She had an attack of phlegmonous erysipelas in the tissues about the wound, about a week after the operation, which for a time caused some anxiety, the more that the pus discharged from the bottom of the wound was of a greenish-black color, and looked uncomfortably like fæcal matter. Moreover, there was a constant bubbling of air in this discharge, which was in reality a gaseous product of decomposition, although at first sight a little alarming. The operation was done in October last, 1865, and when last heard from, in November, the wound was nearly closed, and the patient was well. I never saw so large a *femoral* hernia as this, and should judge that so large a one in that region does not often occur. I should give the dimensions of the sac and its contents, divested of its external coverings, very nearly as follows:—Circumference around long axis, 12 inches; about short axis, 10 inches. This great size was one difficulty to which I would advert in connection with the case; the other was, that the patient being a very stout woman, there was a very thick

cushion of fat to cut through. The extent to which this fat may increase the difficulty of the operation, by necessitating the performance of its final and more delicate steps at the bottom of a cavity rendered very deep by it, has been adverted to by several able operators.

Case III.—*Abscess above a Hernial Protrusion.*—I was called, in Middletown, to see, in consultation, Capt. J. D., having an inguinal hernia, which had become swollen and tender, and gave a distinct sense of fluctuation to the feel. The attending physician, Dr. R. Baker, of this town, considered it to be a case of an abscess forming in the tissues external to the sac of an old reducible hernia. Such, also, was the opinion of the late Dr. J. Knight, of New Haven, and such it proved to be. Dr. K. advised its being opened in a few days, and accordingly I laid it open in about a week from that time, giving vent to a quantity of pus, of so powerful and villainous a smell that it could be perceived in the air at quite a distance from the house, and clung to clothing most tenaciously. At the consultation, Dr. K. remarked, "that in a similar case" which he remembered, "when the abscess was opened a rush of air took place from it so great as to lead the surgeon to fear he had wounded the intestine." Precisely this occurred in this case, and but for the previous remark of Dr. K., I might have been led to a like misapprehension. This patient made a good recovery, and, moreover, there is good reason to suppose that the subsequent natural reparative processes have effected a *radical cure* of the hernia, as I am informed he is no longer obliged to wear a truss.

Case IV.—*Inguinal Hernia, with Sloughing of the Scrotum and portions of Neighboring Tissues.*—I was called in consultation, to Cromwell, Conn., by Dr. Hutchinson, of that place, to see a patient of his, Mr. W., an elderly man, who had an old inguinal hernia. The patient himself seemed to fear that it had become strangulated, as a large swelling would still remain in the seat of the hernia after all his efforts at reduction. Dr. H. believed, and it seemed so to me, that the large swelling consisted of two distinct parts—one, the hernial protrusion, which could be reduced, and the other, tumefaction of the scrotum and tissues around the cord in the inguinal canal, from erysipelatous inflammation, which tumefaction would be of course persistent. An examination, made under ether, strengthened us in this view, and the subsequent history of the case confirmed its correctness. Into this history it is not necessary to go in detail. Suffice it to say, that in the course of the case (which was a long one) large portions of the scrotum sloughed away entirely, leaving the testicles bear in their sacs. The same process went on in the tissues around the cord in the inguinal canal. The patient was kept upon the most nutritious and stimulating diet he would bear, with tonics, &c. &c. Locally, disinfecting washes, poultices, and the like, were employed. Finally, thanks to a good constitution,

and, perhaps I may add, constant watching on the part of both nurses and physicians, he recovered. The sloughs all came away, and exuberant granulations appeared everywhere in the track of the opening. In this manner the gap in the scrotum has been closed, and, what is better still, the same result has been obtained in this case as in Case III., viz., a *radical cure of the hernia.*

To these cases I would add a brief glance at two others—both inguinal hernias in adult males—which were strangulated, and to which I was called to operate, but which finally gave way, and were reduced by taxis under ether, although they could not be so reduced until the heads of the patients were placed as low as the floor, the hips remaining upon the edge of the bed. When so placed, reduction was easily effected.

December 20th, 1865.

CLINICAL LECTURES ON AMBLYOPIA AND AMAUROSIS, BY PROF. A. von GRAEFE.

[Concluded from page 462.]

Case VIII.—*Temporal Hemiopia, following a Basilar Affection (supposed Periostitis); Dubious Prognosis; Recovery.*

Mrs. Emily B., 36 years of age, presents herself at the clinique on account of an impairment of vision that has lasted only eight days. On examination, there is found in each eye acuteness of vision of only $\frac{1}{2}$, as also an entirely symmetrical defect in each temporal half of the field of vision. All perception of light is lost over the space extending outwards from a line going nearly through the middle of the "blind spot," while over the space between such a line and a vertical one passing through the point of fixation, perception is so imperfect that fingers can be counted only in the immediate vicinity of the latter. On the nasal half of the field, on the contrary, eccentric vision is everywhere normal, even by reduced lamplight. In conformity to this the temporal phosphene is entirely wanting, while the nasal is produced with great ease and distinctness. The ophthalmoscopic examination gives an entirely negative result. As regards the antecedents and the mode of development, the following is obtained: the previous health of the patient had always been good, and no trace of syphilis had ever existed; but several months after her last (seventh) delivery she had been seized with headache of extraordinary severity, and at the same time with diplopia. She had been at the clinique for this half a year before her present visit, and at that time the cause of the diplopia was found to be a paralysis of the right abducens, the functional state of the retina itself seeming to be entirely normal. The cause of the paralysis, as well as of the headache, we supposed to be akin to periostitis (basilar). The headache entirely yielded

at that time to a derivative course of treatment, but the paralysis of the abducens proved excessively obstinate, so that after iodide of potash had been given for several months and electricity tried, a loss of mobility to the extent of more than 1½‴ remained almost stationary, and the consequent confusion of vision (contraction of the internus having resulted) had to be relieved by setting back the insertion of the left rectus internus. From that time up to within eight days of the present visit the patient had been perfectly well; the catamenia had, however, failed to appear at the last two periods, and she was then attacked by heavy and violent pains extending over the entire head, as well as by the derangement of vision already referred to, which continued steadily to increase.

No particular result is obtained from a general physical examination. The patient is free from fever, but has a worn look, attributable, no doubt, to the loss of sleep caused by the pains in the head. Neither is anything definite discovered by the exploration of the orbits; each bulbus allows itself to be pressed against the cushion of fat without thereby exhibiting any signs of sensitiveness. On the other hand the skull, particularly on the level of the basis cranii, is exceedingly sensitive to tapping, the most pain being caused when two points, situated opposite each other, are simultaneously tapped.

It is clear that the reason of the present derangement of vision must be located at the basis cranii. No change that could account for the limitation of the field of vision is to be met with in the eye; such cases of temporal hemiopia being in general hardly ever dependent on intra-ocular complication. An orbital cause might certainly exert an influence on the nasal portion of the optic nerve; still, leaving out of account the fact that such a cause must be symmetrical and affect both sides, there exists no sort of basis for such a supposition. On the other hand, the localization of the difficulty at the middle of the basis cranii satisfactorily explains all the symptoms. We know that a cause of disease which has its seat here and acts upon the optic nerves, first affects the fasciculi cruciati, and thus involves the connection with the temporal border of the field of vision. If the action extend equally on the two sides, the temporal limitation of the field of vision will be symmetrical. We never in these cases find the defective portion standing out in such sharp relief against the part that retains its normal functions as in hemiopia on similar sides. This is, *à priori*, comprehensible. When one tractus opticus is paralyzed, perhaps from a loss of cerebral connection, the boundary of the perceptive portion becomes sharply defined, corresponding to the distribution of fibres of this tractus on the retina, and following the example of what occurs in paralysis of the trigeminus, in the median line of the face. If, on the contrary, the two optic tracts feel the influence of a morbid cause having its seat at the middle of the basis cranii—an irritated state, for example, of the connective tissue, proceeding from the periosteum—it would be

hard to understand how the action thereon dependent should expend its full intensity on certain bundles of fibres without to some extent implicating those adjoining. We therefore find under all circumstances in cases of temporal hemiopia, an intermediate region* in the field of vision. The case of the patient now introduced completely harmonizes with this view—the field of vision, as already stated, failing entirely beyond the "blind spot," while between the "blind spot" and point of fixation a gradual increase of sensitiveness to impressions takes place. The theory of a basilar origin finds further support in the nature of the pains in the head and the increase in them caused by tapping the head in the region of the basis cranii, a symptom which, though wanting in many cases of basilar disease, is certainly not without significance when present. A similar meaning is to be ascribed to the nature of the affection passed through six months ago. Besides intense and general headache, it was characterized by the particular obstinacy of the accompanying paralysis of the abducens. Experience teaches us that the ordinary, so-called rheumatic paralysis of the abducens may be accompanied at the time of its development by local pains in the forehead and temples, but not by general and severe headache; moreover, when once the greater part of the power of motion has been restored, such cases of paralysis generally recover more uniformly and completely than was the case here. Finally, if the location of the difficulty within the cavity of the cranium be once allowed, the theory of a basilar origin receives support from the fact that there is not the slightest reason for supposing it to be in the cerebrum. In spite of the pronounced paralysis, formerly of the abducens and now of the crucial fibres of the optic nerves, there have been neither hemiplegic attacks, mental derangement, nor affections of the head of any kind to indicate a disease of the cerebral substance.

The task of deciding the nature of the basilar cause is much more difficult. The rapid development of the symptoms supervening on a state of perfect health, the extreme severity of the commencing headache, the entire intermission between the two attacks, seem at first sight to indicate an inflammatory condition rather than a new growth. Still, the possibility of the latter must not be entirely excluded. When tumors gradually form at the basis cranii, they may, as such, remain latent, and only betray their presence periodically by taking on a state of irritation. On the other hand, it is the exception for new growths that have once given rise to symptoms of paralysis, to allow a temporary return of an entirely normal condition. As a rule, we have only variations in the symptoms of

* *Uebergangsbezirk.* No analogous terms exist in the English language for many similar expressions. We are here to understand that the portions of the retina respectively destitute of vision, and which retain their normal powers, are not sharply separated from each other by a defined boundary, but slowly merge, the one into the other, over a region which, if the term be literally translated, bears the name of the "district of transition."—TRANSLATOR.

paralysis, some taking their departure and others making their appearance or persisting. When we are not able to form a definite diagnosis with certainty, and probabilities are evenly balanced, it is without doubt a sound, practical principle to proceed on that theory which seems to open to us the best field for effort. This is preëminently true when the probabilities incline in favor of that theory. Let us then, in the case of our patient, for the present dismiss the idea of a basilar neoplasma, and give our attention to the theory of an inflammatory affection. And this can be well located only in the dura mater. Inflammations of the more delicate cerebral membranes have too great a tendency to diffusion to cause paralytic affections within such narrow limits. Their development is generally rapid, and is accompanied by febrile and general cerebral symptoms, while they pass off in a different manner. The date of the first attack renders it, moreover, possible for us to connect the defined pachymeningitis, which we feel warranted in assuming, with the puerperal state. We possess relatively few anatomical and clinical facts with regard to such defined basilar affections. I have, however, acquired the conviction, in which, too, the results of autopsies have strengthened me, that the most varied forms of basilar paralysis spring from this source. This is particularly applicable to certain forms of recurring paralysis of the muscles of the eye, in fact processes of a periostitic nature are as a rule prone to recur.

Our prognosis cannot be other than doubtful. The difference in this respect between temporal hemiopia and that occurring on similar sides (Case IV.) is very striking. While in the latter the continued action of the same morbid cause does but complete the hemiopia, and never causes blindness of either one or both eyes, it is of course possible for a source of disease situated at the base of the brain to exercise a constantly increasing effect on both optic nerves, overstep the limits of the fasciculi cruciati, and end in absolute obliteration of the field of vision (Case VI.). On the other hand, an entire pause in, or even complete disappearance of, the disease may occur at any stage whatsoever. This would substantially depend on the nature of the morbid cause. Inasmuch as in our case the supposed cause may disappear, and has been so short a time in force that disintegration of the nervous elements is neither to be expected, nor visible on the papilla, recovery is possible. A more exact definition of our prognosis, as regards either the derangement of vision or the subsequent result, must naturally be based on the course of the disease.

The patient was first subjected to a derivative plan of treatment (leeches behind the ears, then dry cupping, drastic pills, derivative foot-baths, later iodide of potash). Under this the headache entirely ceased, but the field of vision remained the same, and its acuteness even became reduced to $\frac{1}{4}$. The general condition, too, excited constantly increasing fears. The urine became considerably increased

in quantity, and marked pallor, loss of flesh and weakness simultaneously presented themselves. The daily amount of urine was from 4000 to 6000 cubic centimetres; its specific gravity varied between 1002 and 1005. The color of the urine was extremely light; it was examined by Dr. Kühne, and proved to contain neither sugar nor inosit. In the morning, thirst became unquenchable. These symptoms having reached their height about four weeks after her admission, and the bodily weight having fallen, without any increase of temperature, to 94 pounds, the dose of iodide of potash was reduced from ℈ i. to ℈ ss., and liquor ferri chlorati at the same time ordered. A few days after this prescription, but possibly entirely independent of it, a diminution of the thirst and in the quantity of urine showed itself, shortly after which the bodily weight and vision commenced steadily to increase. Seven weeks after her first introduction no defect in the field of vision could be made out; the eccentric vision, however, in the temporal zone, particularly outwards and downwards, was still indistinct; the acuteness of vision amounted to $\frac{2}{3}$; weight 100 pounds; average quantity of urine in the twenty-four hours rather over 2000 cubic centimetres; specific gravity, 1010. Four weeks later the patient was discharged entirely convalescent; weight, 108 pounds; urine normal in amount; field of vision irreproachable, even by diminished light; acuteness of vision more than $\frac{5}{6}$; satisfactory complexion and tone.

I would state, in conclusion, that the patient, who is a resident of this city, has been shown at considerable intervals, and that the last extract from our records, written more than a year after the derangement of vision, bears witness to an entirely normal condition of things. The catamenia, too, reappeared during the progress of the convalescence. The entire and apparently permanent recovery gives, we think, an increased support to our original diagnosis of a local basilar periostitis, although, of course, the obscurity of these regions leaves ample room for doubt. I was particularly interested in this case, partly on account of the entire disappearance of so marked a hemiopia, partly because the urine, in spite of its increase in quantity, contained neither sugar nor inosit. As regards the first, my experience permits me to recal but few such fortunate results; the coincidence with intra-cranial processes of an increase in the quantity of urine has been, it is true, considerably studied; but, as far as I am aware, not yet recorded in connection with such a group of symptoms as the present.

The mortality of Baltimore for the year ending Dec. 26th, reached 4,695, a decrease of 873 from the previous year. Consumption carried off 931, and diphtheria 109; 27 were between 90 and 100 years, and six were above 100 years.

CLINICAL STUDY OF THE PRESENT EPIDEMIC OF ASIATIC CHOLERA.

(Concluded from page 455.)

THE least inefficacious treatment, in my opinion, during the cold stage, still consists in the employment of diffusible stimulants within and without. Alcoholic preparations have a visibly useful action in the mild cases, the only ones, unfortunately, which yield to medication. Instead of adopting an exclusive formula, I am in the habit of varying the form of the stimulants in order to avoid the disgust which any single article quickly excites in the sick if employed continuously. The nurse charged with this duty has at her disposal various tinctures of which the dose only is directed beforehand. We succeed thus in obtaining more docility on the part of the patients, as they are not wearied by the constant use of one remedy. Excitants of another kind—acetate of ammonia, &c.—appear to me inferior to alcoholic tinctures. At the same time the use of these is attended with an inconvenience which I would mention incidentally. They act upon the back of the throat like caustic irritants, and at the period of reaction the patients complain of a sore throat, which is quite painful. The tongue becomes dry, the lips are dark colored, the sputa bloody, and if not understood these unimportant symptoms may be unfavorably interpreted.

Externally, I prefer the essential oil of turpentine to blisters or even sinapisms. This oil, in the proportion of a teaspoonful poured over a large linseed poultice or one made of bread crumb, is the most rapid, the most sure and the most thoroughly active of rubefacients.

Frictions and flagellation are employed with difficulty in a hospital; and even elsewhere I have not seen that they act more energetically than irritating applications.

I have not employed either emetics or purgatives in the most severe forms, not being encouraged either by my own observations or by the results obtained by other physicians in previous epidemics. A certain number of desperate cases recover, but I know of no signs to which we can trust as a prognostication of the possibility of a cure in a disease in which the changes are so frequent. How can we count upon a prognostic when death itself is most often not announced by any precursory sign, the patient dying suddenly, it may be the moment after he has been left, without spasms, without convulsions, without the death-rattle!

Autopsies, it can be easily understood, can be made only in haste. The lesions of the small intestines, so often described, are never wanting. The ileo-cæcal valve is tumefied, infiltrated, vascular; the small intestine, for a distance of from sixty centimetres to a metre [about twenty-four to forty inches], or thereabouts, is infiltrated in the same way. The glands of Peyer are flattened, wrinkled, blood-

less, looking as if they had been macerated in an astringent liquid; the isolated glands are varioliform, slightly prominent, and stand off like white grains on the reddish back-ground of the intestine. In two patients whose evacuations were like wine lees, the small intestine was of a violet-red, very finely arborescent. The mucous membrane, of an unusual thickness, was velvety under the finger. In some cases we find small ulcerations by drawing the finger-nail across, greyish at the bottom, scattered at random. The large intestine has no characteristic lesion.

This constant alteration of the lower part of the small intestine is certainly one of the most significant facts of this disease. It is not without interest to see an affection profoundly septic like the cholera, unlike other maladies of the same order, exempt from cutaneous manifestations, declaring itself by an intestinal eruption in the same situation as that occupied by the lesions of typhoid fever. The state of the small intestine explains the sensations which we perceive on pressure over the right iliac fossa; the slight pain, but more marked at this point than any other during the first hours, and so long as the patient retains any sensibility; the crepitating gurgling, the flaccidity of the belly, which does not become tympanitic until the normal functions of the intestine tend to be reëstablished.

The examination of the other organs has afforded me nothing which seems to be worthy of special mention.

When death does not take place during the cold stage, the disease enters upon a new phase which is usually known as the period of reaction. The warmth returns shortly or with marked rapidity. The pulse rises without the respiration becoming less anxious, the face is less cadaveric, the tongue grows warm generally less promptly; the vomiting has usually ceased some time before, but the diarrhea continues more or less abundant and sometimes hardly changed.

The second stage has neither less gravity nor less importance than the first; but as it is attended with less urgent symptoms it allows a more particular study. The symptoms have no longer the desolating uniformity of the cold period, but how many unfavorable chances there yet remain!

The true reaction, which leads straight to recovery, occurs gradually without any abrupt changes; everythimg improves at once: the patient feels himself better, the stools are less frequent and are of different character. Twenty-four hours are enough in favorable cases to ensure convalescence. I do not hesitate under these conditions, unfortunately exceptional, to increase the amount of food taken. The appetite revives and the digestion is restored; solid food seems to me preferable to any liquid nourishment. Before each meal I make the patient take a teaspoonful of wine of cinchona with laudanum, and a little coffee after.

The incomplete, irregular reaction is almost the rule. It ap-

pears in two ways: either the chill persists in a less degree, increasing at intervals, or the skin becomes excessively hot. All the cyanosed spots become colored, the conjunctivæ are injected, the face is animated, the respiration is more laborious, the chest is expanded with effort, the pulse remains slow, at 60, or perhaps higher; but rarely, very rarely does it rise to the standard of the pulse of great fevers. I have never found it above 90.

But it is neither to the respiration, nor the heat of the skin, nor the evacuations that the physician should direct his attention. All the danger is in the cerebral accidents which are developed under a form which we do not find in any other disease. To describe the condition of a cholera patient at this time under the name of typhoid, is to employ a term more justified by appearances than by the reality.

Delirium begins sometimes at the commencement of the cold period, but oftener it does not declare itself until after the first twenty-four hours. The delirious patients present a striking contrast with their neighbors equally affected, but retaining the integrity of their reason. The first delirious manifestations consist in the refusal to submit to treatment. This is a bad symptom.

They speak in broken words, without order or connection, but they answer questions if they are put with some persistence, and immediately relapse into their drowsy condition. By degrees the delirium becomes more violent. The patients throw themselves about, they rise up, jump out of bed, run half naked through the ward, with wild eyes, but having no definite object in view nor making any violent resistance when forced to return to their beds. This excitement alternates with a comatose stupor, during which the half-open lids and the eyes invariably convulsed give to the physiognomy a fearful aspect.

The extremities are more or less agitated with convulsive spasms without plucking at the bed clothes, particularly the upper ones. The face remains unmoved.

During all this time, and this is one of the peculiarities of the delirious reaction, the circulation preserves its rhythm; the pulse, which one would expect to find rapid and vibrating, is soft and generally slow, the impulse of the heart feeble. In many cases the first sound alone can be perceived by the ear, the second being completely inaudible. We know that in typhoid fevers attended by great prostration it is, on the contrary, the first sound which is muffled, while the second has a vibrating character. The anxiety of the respiration does not depend on pulmonary congestion; auscultation reveals a respiratory murmur, full but not deep, without any rales anywhere. It is the embarrassment which accompanies cerebral lesions of a subacute character. In children, in whom cerebral lesions have less diversity than in the adult, one would

think he was dealing with a meningitis rather than a typhoid fever with predominance of cerebral symptoms.

The tongue is generally dry, but is sometimes moist, in which case it is always cold.

Death too often, but not always, at the end of many hours or days, puts an end to this sad scene. It is sudden, without precursory symptoms, or it is announced by a gradual coldness against which all stimulants are unavailing; by this time the restlessness has been succeeded by a continuous coma.

I have heard the event attributed to the insufficiency of the reaction; in the cases which I have seen it was not the debility but the disorder of the nervous system which was most marked. The aged and adults, already excessively enfeebled, were almost the only ones who seemed to succumb to the excess of debility; and yet, in looking at these more closely, cerebral disorders could be discovered under their apparent passivity.

The treatment of the period of reaction is delicate and full of uncertainty like the disease itself. The bloody discharges have not seemed to me to moderate the excitement, nor have they on the other hand increased the debility. Stimulants are not in place, cutaneous derivatives are without appreciable influence. Opium, so generally efficacious in the delirious conditions which accompany eruptive fevers, is of no avail. It is not suddenly, after a night of sleep, for example, that the excitement subsides, but it is by a diminution almost insensible. Each case requires its own treatment, so to speak. I have, like all other physicians, tried many remedies, without finding one of them which has seemed to me sufficiently favorable in its results to deserve general use.

To say that the treatment should conform to the indications, is not to admit that it is powerless. I am thoroughly convinced that I have been able to contribute to recovery, sometimes by one means, sometimes by another.

Affusions, turpentine internally, even in large doses, musk much more rarely, a diet almost rash, repeated purgatives in spite of the persistent diarrhœa, have been attended with good results.

One may see by the sketch which I have drawn how little the present epidemic differs from those which have preceded it; the same succession of symptoms, the same lesions, the same terribly discouraging mortality. Not only has the cholera which reigns at Paris no characters peculiar to itself, but wherever it reigns it presents the same monotonous symptoms. * * * * *

To these purely clinical data I will add but a word on the extrinsic conditions which have seemed to me to favor in Paris the development of the disease. Among the patients in the hospital Necker two or three only, up to the present time, have been taken with cholera in the wards where they were under treatment for other affections. Of two men whom I have had to treat, the one was affect-

ed with a mild typhoid fever, who recovered; the other had been for many months subject to a profuse, serous diarrhœa, combined with an organic affection of the liver, the spleen, and accompanied by an enormous ascites. I know that, in other hospitals, the patients have not enjoyed the same immunity, although special services were assigned to cholera patients.

Outside of the hospital I have been able to determine the existence, already remarkable, of epidemic foci. A single lodging house of Plaisance, a faubourg recently annexed to the city, has given us five patients. Often the husband, wife and children have been simultaneously attacked. It has seemed to me that cholera, thus contracted, had an intensity of more than usual power.

In the female wards, under the charge of my friend Dr. Boullay, experience has sadly confirmed the law, already most unequivocal, that not only is pregnancy a fearful complication, but that it seems to predispose to the attack of the disease.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JANUARY 11, 1866.

A Question which should be Settled.—It is a fact of common notoriety that there exists at the present time, and has existed for some years in this city, an institution professing to supply a medical education to its pupils, which makes frequent and urgent calls upon the munificence of a community whose free-giving is inexhaustible in a good cause; which appeals to the sympathies of the most enlightened class; which professes to occupy a position in advance of all our medical institutions; which has acquired the power and means sufficient to organize what purports to be a hospital with peculiar claims upon the benevolent, the government of which has succeeded in prevailing upon some of our most eminent practitioners to lend it the sanction of their names and influence as consulting officers—and yet this institution, by any fair interpretation of the by-laws of the Massachusetts Medical Society, is no better than a school of irregular practitioners. We refer, of course, to the Female Medical School, and its associate hospital.

It is no new thing for the minds of the members of the medical profession here to be profoundly exercised by this state of things. Nothing but the high standing of the gentlemen who have been willing to sanction it in the method we have mentioned, could have prevented such a connection being presented to the Massachusetts Medical Society long before this for their consideration. We would not for a moment be suspected of believing that these gentlemen, in acting as they have, have been actuated by any other than the most unselfish and disinterested motives. Indeed, we are assured that some, if not all of them believe that in so doing they were helping to break down what they consider an unfounded prejudice in the minds of physicians and the community

at large against female physicians, in aiding by their professional advice to carry out the purposes of institutions which they considered as of a peculiarly benevolent character. But the question is not merely one of duty to the community ; these gentlemen owe allegiance also to the Massachusetts Medical Society, whose by-laws not a few of its fellows believe they are persistently breaking. Now this is a most unfortunate and unhappy state of affairs. It leads to misinterpretation of motives, heartburnings and discontent among a large number of the Fellows, who perhaps, from these very circumstances, do not render full justice to the institutions of which we are speaking. As we have said, the question concerning them is still unsettled, and it should no longer be left open, in justice to all the parties interested.

What is the common feeling of the medical profession of Massachusetts with regard to these institutions ? We can honestly say that it is the rare exception, so far as our experience goes, to hear any other feeling expressed by them than that of unkindness, or bitterness even, if not of contempt or suspicion of the basest motives and practices. This certainly ought not to be while gentlemen such as we have referred to associate their names with one or the other of them. It is time the medical community knew certainly whether such allegations and suspicions are undeserved or not ; whether the institutions which claim so much make good their word of promise, and are therefore deserving of holding not only a less equivocal but a specially honored place among our schools of education and houses of charity. Let us look for a moment at their technical status as measured by the by-laws of the Massachusetts Medical Society. The first by-law of that Society reads :—

" Any person may be admitted a member of the Massachusetts Medical Society, who shall have passed a satisfactory examination before a Board of Censors, as to his credentials, personal and medical qualifications, and character, and shall have signed the by-laws.

" The candidate shall be a person of sound mind, and of good moral character ; shall be not less than twenty-one years of age ; shall have such an acquaintance with the Latin language as is necessary for a good medical and surgical education ; and shall have acquired the principles of geometry and experimental philosophy.* *He* shall have studied three full years under the direction, and shall have attended the practice, of some respectable physician or physicians. *He* shall have attended two full courses of lectures on anatomy, physiology, chemistry, materia medica, midwifery, and the theory and practice of medicine and surgery."

The eighth by-law reads :—

" Any person engaged in the practice of medicine or surgery in this Commonwealth, who has not received such a medical education as is required by By-law I., and any one who shall be guilty of practices forbidden to Fellows, shall be deemed an irregular practitioner ; and

* It is understood that he shall be able to translate the select Orations of Cicero, the Æneid of Virgil, or the medical writings of Celsus, and the formulæ of the Pharmacopœia of the United States ; and that he have a knowledge of Euclid's, Pierce's or Loomis's Elements of Geometry ; also of Golding Bird's or Olmstead's Natural Philosophy, or the Cambridge Course of Physics.

If the candidate be a graduate of any college, the examination in these branches may be dispensed with.

it shall be disreputable for any Fellow to advise or consult with any such irregular practitioner, or in any way to abet or assist him as a practitioner of medicine or surgery."

The Italics above are ours, and they clearly settle to our minds the position of the Female Medical School and the Female Hospital: they unquestionably do not come within the recognition of the Society in these laws, and are therefore by a fair interpretation ruled out from the professional sympathy and coöperation of its members. We are not speaking of the justice or the wisdom of this, but simply of the fact. We believe this to be the common opinion of the medical profession upon this subject: and it is certainly time that they should be relieved of the load of odium which invariably attaches itself to all connected with them until the Massachusetts Medical Society shall have considered the question of their right to the position which they claim to hold. That such a decision is important to the reputation of the gentlemen we have referred to, is evident from the remark which has been made in our hearing, that their published connection with them was a most patent advertisement: and that this connection gives a certain authority to their writings, when they append the title which it gives to their names, is certain, for we have ourselves seen an article thus heralded copied into a foreign medical journal, with the comment that the connection of the author with the Female Hospital in Boston gave special authority to the opinions and statements contained in the article in question!

Thus, then, the matter stands. As we have said, we do not propose now to discuss the merits or demerits of the institutions in question; that is an entirely different issue. The Massachusetts Medical Society should authoritatively say whether the Female Medical College is worthy of being classed with those contemplated in its by-laws or not. If it is, and if it is the pioneer of a great advance in medical education, let it be authoritatively known that such is the case, and it will receive all the honor due such a position. If, on examination, the reverse is found to be true, we feel assured that no one would be more ready than the gentlemen who have anticipated its action to withdraw from the association which they have formed.

We learn from the *Union Médicale* that at the session of the Imperial Academy of Medicine, held on the 5th of December, Dr. Villemin, associate professor at Val-de-Grace, read a paper on some experiments in inoculating rabbits with tuberculous matter from the human subject. The author sums up his researches with the following conclusions:—

Pulmonary phthisis, like tuberculous diseases in general, is a specific affection.

Its cause resides in an inoculable agent.

Inoculation is effected very readily from man upon the rabbit.

Tuberculosis belongs, then, to the class of virulent diseases, and should take a place in nosology by the side of syphilis, but perhaps nearer to glanders and farcy.

In a subsequent number of the *Union* we read that M. Villemin, in his experiments, took softened tubercular matter from the human subject twenty-four or thirty-six hours after death, and inserted it be-

neath the skin of the rabbit by the side of the ear, and found, six weeks or two months after, on killing the animal, tubercles visible to the naked eye in the lungs, the mesentery, the intestine, &c.

The experiments were repeated a great many times. Half of the rabbits of a single litter were taken and inoculated and placed under precisely the same conditions as the other uninoculated half. The conditions were varied in different experiments; sometimes they were kept in confinement, sometimes they were allowed to run at liberty, &c. Invariably the inoculated animals became tuberculous within two months, while those which had not been inoculated escaped the disease.

Dr. Liebreich.—The vivacious and usually accurate Paris correspondent of the *Saturday Evening Gazette* refers, in the letter of this week, to the large *clientelle* which has accrued to the well-known ophthalmologist, Dr. Richard Liebreich (formerly of Berlin), since his removal to Paris. "Spiridion" appears inclined to attribute his success to the fact of its being the prevailing fashion among the French to employ foreign physicians in preference to their fellow-countrymen, and refers sarcastically and at some length to Dr. Liebreich's supposed imperfect acquaintance with the French language. He also makes a serious misstatement with regard to his recently published atlas of ophthalmoscopic plates.

We are informed by our friend Dr. H. Derby, a former pupil of Liebreich, that he attended last summer two clinical lectures, delivered by this gentleman to a class of French students. He evinced a remarkable knowledge of the language, and spoke with the utmost readiness and accuracy. With reference to the atlas of plates, Dr. Derby informs us that the separate illustrations were drawn and colored from nature by Dr. Liebreich himself, who subsequently personally supervised the process of lithographing. The entire work was ten years in completion, and, while it places its author in the front rank of ophthalmoscopic observers, is in itself more comprehensive as well as true to nature than any similar work in existence.

Dr. Liebreich owes his great and well-deserved success as well to his brilliant talents as his unwearied industry. It is a severe and well-merited lesson to the Parisian school which has so obstinately striven against the recognition of specialties in medicine, and has been so slow to accept that overwhelming portion of modern ophthalmology of which it could not claim the origination.

Perchlorure de Fer in Cancerous Disease.—M. Bitot considers the perchlorure de fer a specific in cancerous affections, comparing its action to that of iodine in scrofula; and suggests that it should be employed both externally and internally, in order to affect the diathesis as well as the local disease.—*Gazette Médicale*, of Montreal.

Treatment of Asiatic Cholera.—Perhaps the most remarkable form of treatment which has been employed in past epidemics of cholera, and reported as being successful, is the strychnia and oleum terebinthinæ treatment, a report of which may be found in the *Transactions*

of the American Medical Association, vol. v., page 441, being part of the Report on the Epidemics of Ohio, Indiana and Michigan, by Dr. G. Mendenhall. The treatment was practised in 1850, in the Commercial Hospital, Cincinnati.

I read from the report referred to:—"The following prescription was first tried (in the Commercial Hospital) by Dr. Howes, one of the resident physicians, under whose administration it was continued by the consent and advice of Prof. Edwards, the attending physician at the time, both of them concurring in its propriety. ℞. Strychniæ, gr. ss.; ol. terebinth., f℥ij.; mucil. acaciæ, f℥viij. M. Dose—one tablespoonful, to be repeated every half hour, until the discharges ceased and perfect reaction occurred. In some of the worst cases, the dose was repeated every fifteen minutes. In one case, the amount named in the above prescription was renewed seven times (equal to 3½ grains of strychnia) and given in the course of forty-eight hours. In one case only were the poisonous effects of the strychnia observed; in this case, Ojss. of the mixture (equal to 1½ grains of strychnia) was administered in the course of sixteen hours, and quite severe tetanic spasms were produced, which were, however, relieved in a short time by chloroform inhalations, and the patient recovered.

"The number of cases of cholera treated in the hospital during the year was fifty-seven. Seventeen of these were submitted to a treatment consisting mainly of the exhibition of calomel, camphor, morphia, &c. The conditions and results were as follows:—

In collapse (pulseless at the wrist),	8;	recovered,	0
In approaching collapse,	8;	"	3
In early stage,	1;	"	1
	17;	"	4

"Forty cases were submitted to what is called 'strychnia treatment;' the condition and results were as follows:—

In collapse (pulseless at the wrist),	12;	recovered,	2
In approaching collapse,	20;	"	18
In early stage,	8;	"	8
	40;	"	28

"Six of the fatal cases reacted perfectly under the strychnia and turpentine, and died of consecutive fever."

In fairness to the "strychnia treatment" I have to state, that all of the accounts that I have met with in regard to it in the hands of other physicians than those of the Commercial Hospital, do not sustain its utility.—*Medical and Surgical Reporter.*

Statistics of Massachusetts State Charities, &c.—*State Industrial School for Girls.*—The Trustees of this institution speak highly of its success and usefulness. The expenditures for the year amounted to $17,378. There is a balance due the Treasurer of $2,319. The report of Marcus Ames, Superintendent and Chaplain, presents the annexed statistics:—

No. present in the institution Oct. 1, 1864	144
received during the year	54
returned from indentures	17

returned from hospital	3
returned on visit, having no other home	4
indentured during the year	34
returned to friends, or placed at service, time having expired	17
discharged as unsuitable, from ill health, incapacity, &c.	16
discharged to parents, or sent to good homes,	19
sent to hospital	3
now present in the institution	132

Lunatic Hospital at Taunton.—The report of the Trustees says no new or very striking phase of hospital life has presented itself the past year; the usual and almost monotonous routine of duty has been pursued as in former years. There have been under treatment during the year 560 patients, of which number 107 were new admissions; 181 have been discharged, many of whom have been restored to reason, and have returned to their families and friends in a condition to resume their accustomed duties, and to fill their places in society and in the world. Others have left the institution in a much improved condition; and 80, many of them old and incurable cases, have, at the request of the State Board of Charities, been discharged to them, and by them removed to other and kindred institutions, whose halls were less crowded, or sent beyond the limits of the State, in cases where they had no claim upon the bounties of her charities; and 32 have died. The number remaining in the hospital on the 30th of September was 343.

Dr. George C. S. Choate, the Superintendent, in his report, says the number of admissions during the past four years has averaged twenty per cent. less than during the year immediately preceding the rebellion, and has been decidedly smaller than during any year since 1856. This falling off is attributed to the war.

Lunatic Hospital at Northamptom.—The tenth annual report of the Trustees represents the affairs of this institution as in a very satisfactory condition. The new superintendent performs his duties in a manner receiving their cordial approbation. Notwithstanding the discouragements of the earlier part of the year, its close has been reached without financial embarrassment; and the prospect now is that the hospital will be able to meet its current expenses for the ensuing year without special appropriations. Various improvements have been made in the internal arrangements of the buildings. Complaint is made of the large number of incurables sent from other State hospitals. The total receipts for the year were $85,178, and the expenditures the same, less $658 in the treasury.

The whole number received during the year was 134; whole number treated, 468; discharged, including deaths, 116; remaining Sept. 30, 1865, 352. Of the patients discharged, 33 had recovered, 27 were improved, and 15 were unimproved. The deaths numbered 41.

Massachusetts State Reform School.—The Trustees of the Massachusetts State Reform School at Westboro', make their nineteenth annual report. They state that the number of boys in the institution during the past year ending Sept. 30th, 1865, has been 325. Of these, 241 have been congregated in the main building, 30 in the garden house, 30 in the farm house, and 24 in the Peters house. These separate

families have all schools suited to the boys comprising them, who do nearly all the work of the establishment, besides seating cane chairs and making their own shoes and clothes. Their employment otherwise is gardening and farming. The boys are under no more restraint than they would be in any ordinary boarding-school, each community being in all respects conducted as a family.

The Trustees recommend that an appropriation of fifty thousand dollars be made during the coming winter, on the condition that a like sum be raised by private subscription, for the purpose of establishing ten new family houses similar to those now in existence at Westboro'. That number of houses would speedily be filled, and it is believed that the sum named could easily be obtained from private individuals in aid of the object.

The Superintendent reports the health of the boys as generally good during the year. There were six deaths within that period—three of dysentery, one of consumption, one from the inhalation of chloroform in treating an accident, and one from hæmoptysis.

The receipts of the institution, from all sources, during the year, were $67,929·21, and the expenditures $58,305·50.

Nautical Branch.—The Trustees of the Nautical Branch of the State Reform School make their Sixth Annual Report, and say the system has justified the hopes of its founders, in proof of which they quote very interesting facts. It appears that there were 163 boys in the School on October 1, 1864, and on the 30th September last, the number was 165—the admissions being three more than the discharges. The average age was about 15 years. The average time spent by each boy in the institution was nine and one third months. The nationalities were, natives 137, foreigners 35. No death occurred during the year. The library has been largely increased. Religious services have been regular. The conduct and improvement of boys in school has been good.

Almshouse at Tewksbury.—The Twelfth Annual Report of the Inspectors represents the schools of the institution as in most excellent condition. The number of children in them May 1, was 152. The whole number in the institution was 154.

The health of the inmates for the year has been good. No epidemic has prevailed.

Thomas J. Marsh, the Superintendent, gives the following statistics in regard to the inmates :—

Number at the commencement of the year, 648 ; admitted during the year, 1650 ; discharged, 1661 ; supported, 2298 ; births, 57 ; deaths, 192 ; present number, 637.

The cost of the institution for the year was $64,076 ; the average weekly outlay for each inmate was $1·68½.

Almshouse at Bridgewater.—By the reports of the Inspectors it appears that the number of inmates in the institution Sept. 30, 1864, was 482 ; admitted during the year, 1393 ; discharged during the year, 1231 ; deaths during the year, 165 ; births during the year, 52 ; sick now in the hospitals, 127 ; number of children removed to Monson, about 60 ; number of children now in almshouse, 128.

From the Report of the Superintendent it appears that the current expenses for the year were $44,851. The average cost of supporting the inmates was $1·30 per week.

Dr. Samuel Young, the physician, gives an interesting summary of the matters pertaining to his department. Of the 165 deaths during the year, 20 were from consumption, 13 from marasmus, 8 from paralysis, 7 from cancer, 3 from hernia, and 16 from old age. Twenty-one died who had passed their three score years and ten; of these, seven had passed their four score years; of these, three had passed their ninetieth year, and one lived to the extraordinary age of 97 years.

Almshouse at Monson.—The following statistics are given:—The number of inmates Sept. 30th, 1864, was 620; admitted and born during the year, 803; discharged, indentured, deserted and died, 882; remaining Sept. 30, 1865, 541; average number supported through the year, 605; increase over the average number supported last year, 48. Cost per week of maintaining each inmate, 1.07\frac{39}{52}$. Of the 541 inmates now in the institution, 401 are children under 15 years of age. The record of mortality was larger than it was last year. In violation of a law enacted by the Legislature last winter, persons are still sent to the almshouse in a dying condition. In the month of September four such were received, all of whom died within forty-eight hours after admission. The number admitted to the hospital during the year was 811; discharged, 712; deaths, 29; births, 30, of whom 18 were illegitimate.

We would call the attention of our readers to the advertisement of our friend Dr. W. H. Prince, on the last page of the Journal, as worthy of their special consideration. We have known Dr. Prince for many years, and can assure them that any patients confided to his care will find themselves in charge of a gentleman in the highest sense of the word. His house is in a beautiful situation, and supplied with everything which could be desired for the well-being, comfort and privacy of his patients.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, January 6th, 1866.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	36	31	67
Ave. mortality of corresponding weeks for ten years, 1853—1863	40.8	38.9	78.7
Average corrected to increased population - - - - -	00	00	85.75
Death of persons above 90 - - - - - - - -		0	0

Married,—In this city, 3d inst., Edward G. Loring, M.D., to Miss Chevalita Jarves.—In New Orleans, Dec. 30, J. T. Paine, M.D., of Charlestown, Mass., to Miss Rosa Lewis, of New Orleans.

Died,—At Melrose, 1st inst., Dr. George S. Macomber, 46.

Deaths in Boston for the week ending Saturday noon, January 6th, 67. Males, 36—Females 31. Accident, 1—apoplexy, 1—congestion of the brain, 1—disease of the brain, 1—bronchitis, 5—cancer, 1—chlorosis, 1—consumption, 14—convulsions, 2—cyanosis, 1—debility, 1—diarrhœa, 1—diphtheria, 1—dropsy, 1—erysipelas, 1—scarlet fever, 1—hæmorrhage, 1—disease of the heart, 3—infantile disease, 2—disease of the kidneys, 1—inflammation of the lungs, 6—marasmus, 1—measles, 1—old age, 3—premature birth, 3—puerperal disease, 1—scrofula, 1—smallpox, 2—unknown, 8.

Under 5 years of age, 23—between 5 and 20 years, 9—between 20 and 40 years, 17—between 40 and 60 years, 10—above 60 years, 8. Born in the United States, 47—Ireland, 15—other places, 5.

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CHOLERA—ITS MANAGEMENT AND MEDICAL TREATMENT.

Read before the Norfolk District* of the Massachusetts Medical Society, Jan. 10th, 1866, by BENJAMIN E. COTTING, M.D., of Roxbury.

I. No one who looks over the chart of the wanderings of cholera, or examines the accounts of its various visitations, can fail to be struck with the irregularities of its movements and the uncertainty of its progress. It goes about unmindful of any law yet detected, often in the wake of migrating masses, but not unfrequently regardless of human barriers, and unobservant of the usual routes of human intercourse and traffic. Vessels sailing from an unaffected port are attacked, a thousand miles apart, in mid-ocean. An island, far out at sea, is seized upon. A ship loaded with disinfectants loses its crew on the voyage. The filthiest place in a crowded city is repeatedly passed by. One side of a populous street is invaded, the other untouched. A large city escapes, while in constant and unrestrained intercourse with another which loses thirty thousand persons. Other places, perfectly isolated, are fastened upon—how, or by what means, defying all discovery. In fact, it is far from proved that this disease (or any other epidemic) travels out of its way to avoid favored localities, or to attack filthy and overcrowded places; but, simply, that when the morbific influence rests upon a country, the latter offer a greater proportion of victims in their crowded, impoverished, intemperate, and half-fed inhabitants. Hence the failures thus far of quarantines and sanitary cordons; and a reason for, if not the reasonableness of, the Pope's decision, last season, not to take unusual precautions, but to trust the "Eternal City" to the care of Providence. An English paper derided him for this, and, tauntingly, hoped that he would be more fortunate than in his previous reliance on the same Power. Rome escaped attack, while An-

* It is customary in this District Society to propose questions for discussion, and to appoint members (in alphabetical order) to open the discussion by short written papers. Hence the origin of this article.

cona was decimated, actually losing three thousand out of thirty thousand inhabitants.

The most probable conclusion seems to be, that, whenever the morbific influence passes to, and settles upon, a locality, it remains there until it has accomplished its fatal purpose; and that, before this influence has reached such a locality, diseased individuals may be brought to, or within its borders, without greatly endangering residents therein. Thus the disease did not spread when carried to New York, last autumn; or from similar importation in 1848, though some months later the city was invaded from an entirely different direction, and suffered severely.

In view of such and similar facts the French Government have recently (October, 1865) proposed international conferences in order to adopt measures, with a view "to stifle the evil in its origin," —reputed to be in the fluvial districts, and the holy cities of the East. "It does not suffice" (says the Report of the French Ministers) "to oppose to it, at its various stages, obstacles which cause serious prejudice to trade and commerce, and which are but too often powerless in protecting public health." It remains to be seen what these measures may be, but one must not feel too sanguine. Mecca is the yearly resort of hundreds of thousands of religious enthusiasts, who rush thither regardless of pestilence, and who may not respect cordons, or fear the sword. The Ganges is a large river, and the multitudes bordering thereon are not remarkable for readily conforming to the projects of outside barbarians. In these days of inter-migration the *world will move;* and, as we well know, not even double picket lines of opposing armies can prevent the crossing and re-crossing of determined persons impelled by curiosity, cupidity, or other powerful motives. Nevertheless the project is a laudable one, and deserves the hearty support of every government, and every individual, whatever may be its results. Yet there is too much reason to fear that, whenever the time arrives for the spread and devastations of the epidemic, it will overleap all barriers, and roam where it listeth.

Whenever, then, in the course of events, the "disease-poison" shall visit this country, we may expect, from its previous history, an irregular progress, and unaccountable variations in severity—that it will remain in any locality it descends upon until its work shall be accomplished, a time not materially influenced by its lightness or severity, or by the situation and conditions of the place attacked—that its most frequent victims will be among those, who, from whatever causes, are the most suitable subjects for any epidemic, though the apparently vigorous and strong may not wholly escape—that, as in former outbreaks of the disease, neighbors of those attacked will often be spared, though in conditions apparently much more unfavorable—and that, when the disease moves onward, it will frequently proceed in unforetold and unexpected directions, and will repeat-

edly disappoint public and private calculations—putting at defiance human control or "management."

II. Quarantines and cordons having hereunto failed to prevent outbreaks of cholera, a multitude of expedients have been resorted to, or suggested, to cut short the disease in individuals, or to render it innocuous. One extreme of these, the inoculation of syphilis, only equals in vileness the inert futility of another, the carrying a few grains of camphor about the person. It is hardly necessary to say that a trustworthy preventive for individuals has not yet been found. Sanitary measures, as they are called, are the most important, and should be thoroughly carried out always—not less in seasons of exemption than on the approach of epidemics. For filth and uncleanness, though not disease, nor its primal cause, any more than guano is a cabbage, are nevertheless good fertilizers when the seed is scattered broadcast, and should not be allowed to accumulate at any time, much less till the enemy is at the door; since it seems reasonable that the more a nuisance is stirred in the presence of a pestilence the more deleterious it may become. Keep, therefore, the city, house, and person, at all times, clean; a sane mind and a clean body are the best safeguards for the State, and the individual.

"I believe," says one of our "oldest and most eminent physicians"—"I believe that the best prophylactics against this disease are strict temperance, wholesome food and clothing, uncrowded residences and lodgings, and avoidance of excesses of all kinds."

"Hygienic precautions are the best safeguard; whoever lives *wisely* will seldom suffer from cholera," says Velpeau, the great professional oracle of France.

To the same effect the old verses, quoted in a recent periodical—

> "Tiens tes pattes au chaud,
> Tiens libres tes boyaux,
> Ne vas pas voir Marguerite,
> Du choléra tu seras quitte."

Temperance, wisdom, virtue! when these shall universally prevail many other evils besides cholera will disappear, or become of little account. But if, in our less favored days, and until the present order of things is changed, in spite of all practicable precautions, the disease visits our people—what, then, is to be done? The medical treatment of those attacked is a question raised by our subject. But it is a question more easily asked than answered. The greatest possible varieties of treatment, and the greatest possible absurdities, have had their advocates. One believes the disease to be the same in cause and nature as *sea-sickness;* and another that it is the result of variola mitigated and changed by vaccination—and they prescribe accordingly. In a former epidemic the actual cautery was resorted to; now ice-bags are in vogue (at least at Southampton). The pages of periodicals are filled with uncounted numbers of formulæ, of all degrees of potency and appropriateness—from emetics to ptisans, and from purgatives to plugging the rectum.

On the approach and invasion of an epidemic, disorders of a somewhat similar character, but of milder type, frequently prevail; and no one can wholly escape the operation of the deleterious influence. As to those abdominal disturbances which may occur during the presence of cholera, most teachers urge treatment to arrest or stay their progress—though some advocate purgatives or advise that the diarrhœa should not be checked, but rather promoted, in order to carry the poison out of the system. As examples of the more rational and milder practice—Guérin finds that charcoal (three or four lozenges daily, before meals) is quite sufficient to neutralize premonitory abdominal disturbances; and Velpeau considers three or four drops of laudanum, followed by an opiate enema if necessary, the most trustworthy on the supervention of colic and nausea. Cholerine (as such disorders are sometimes called) is generally easily managed by prudent persons—prudent in diet and general habits. But cholerine is not cholera, or the cause of it. Many succumb to cholera, after recovery from cholerine; and often cholera makes its attack without any warning appreciable to the patient. We believe, however, that the disease, like many others, has a period of incubation in every instance.*

"When the attack assumes a more serious form," says M. Velpeau, "and vomiting sets in, the patient must be considered in great peril, because the remedies introduced into the stomach are no longer absorbed, and become absolutely useless. External measures of treatment must now be resorted to, such as frictions, hot blankets, &c., very insufficient defences against so formidable an enemy. This, however, is the sad truth, and cannot be altered by idle lamentations."†

Even the subcutaneous introduction of sedatives, we may add, has proved inefficacious; the action of the absorbents being altogether lost or suspended.

As the stomach becomes insensible in most cases of severity, it should not be crowded with drugs or other substances. It is often better to withhold entirely both food and drink, except, perhaps, a few drachms of wine. An enema of pure wine and water, say two ounces of each, has been recommended at this stage. It will do less harm than saline preparations, and may possibly be of service. Rest and warmth of a bed are indispensable, but extremes of heat and cold should be avoided—and the same may be said of other external applications, frictions, &c. Hyperpraxis and tumultuous activity, the great jeoparders of the sick in all severe diseases, are especially to be guarded against in this epidemic.

* "The poison which generates cholera" "certainly possesses in an extraordinary degree the properties which all morbid poisons possess in some degree, of lying latent for a length of time, in certain localities, or in the constitutions of individuals, or both," &c.—*Cyclop. Pract. Med.*, vol. iii., p. 253.

† Answer to Le Verrier, the astronomer, who, at a recent meeting of the Academy of Sciences, adjured those who were acquainted with the truth to state it without any reservation whatever.

Cholera, like most other diseases, often ends favorably. Only about one half even of the worst cases prove fatal. Each case must be treated according to its own peculiar requirements, on such general principles as every rational physician should understand. The milder methods, quoted above, seem reasonable in themselves, easy to carry out, and are supported by amplest experience and the highest authority.

According to a limited experience and observation in former epidemics, that course is best which, with the least violence or perturbation, may soothingly tend to sustain the vital powers during the progress of the disease to its spontaneous termination. *There is no other treatment of absolutely reliable efficacy.*

These views may not be popular (a *nosoclast* is the popular idea of a physician, both in and out of the profession), but they are none the less true; and, in matters of so much importance, the truth should be communicated without reservation.

P. S.—Since the above was written we find the following in the London *Medical Times and Gazette* for November, 1865, p. 577; and we wish, for the sake of the sufferers, that believers in the "*necessity* of medication in disease" in all cases, would ponder well its suggestions before they proceed to heedlessly dose their patients, overlooking, or ignorant of, the real nature and tendencies of their complaints.

Thus a *careful* physician speaks for *himself*:—

"What we desire is a statement of the excess of benefit derived from ice over that from careful treatment without drugs (which we pray for, should we have cholera ourselves) and over other systems of medication. When we say careful treatment, we mean the giving of nourishment, and the comforting the patient in those small details which can only be attended to by a kind and skilful medical attendant, who does not conceive himself bound to *try* something for the sake of appearances."

M. Velpeau also said, at the meeting before referred to, that "the failure of the various medications advocated is attributable to a grievous mistake of the public, and even of professional men, who are under the impression that diseases are not susceptible of a spontaneous cure. Many affections yield without treatment, and, it must be acknowledged, sometimes in spite of all treatment. To this fact we must not be wilfully blind. An opposite opinion unfortunately prevails. . . . . After the exhibition of a remedy the symptoms have yielded once, twice, thrice, or oftener; hence it is inferred that the cure has been in consequence of the treatment. The inference is a natural one, but almost invariably incorrect."

CAN TYPHOID FEVER BE BROKEN UP OR SHORTENED IN ITS DURATION BY MEDICAL MEANS?

[Communicated for the Boston Medical and Surgical Journal.]

MESSRS. EDITORS,—Your correspondent W., in No. 17 of the JOURNAL, seems to be considerably shocked by the opinion advanced by me, in my review of Dr. Cotting's Address, which in substance is the following, viz.:—Typhoid fever, in its formative stage, may sometimes be broken up, at least shortened in its duration, and very much modified in its more severe symptoms, by early and prompt treatment, especially by emetico-cathartics. W., in regard to the two first propositions, with several other "observing practitioners," "knows no such thing." I am very well aware that the opinions of very many eminent medical men of the present day prevail in that direction. M. Louis says, that "experience has shown that a well-marked typhoid affection is not capable of being broken up." Dr. Nathan Smith entertained the same opinion. Dr. Bigelow, too, holds the same views, but adds that "it is but justice to state, that numerous and highly respectable authorities are declared in favor of the efficacy of art in shortening and mitigating these (typhoid) diseases." Dr. James Jackson, whom W. will admit to be just as good authority as any of the above-named gentlemen, entertains views highly in favor of a vigorous endeavor to shorten and ameliorate the disease in question by proper remedies. His plan was to give emetics early in the disease. He says: "But I believe that I can bring so much evidence on this side of the question as to justify the trial of active remedies under proper circumstances, nay so much as to *make it our duty to try them*, until further evidence shall show that there is some fallacy as to that which I shall adduce." Dr. Jackson then gives his experience in some hundreds of cases, with or without emetics, which was the remedy most relied upon by him. The conclusion arrived at was decidedly in favor of giving emetics in the onset, as calculated to shorten and ameliorate the disease in question. Dr. Brinton, physician to the Royal Free Hospital, London, firmly believes in and advocates the "cure of typhoid fever" by the breaking-up plan. He says, "emetics in fever are most advantageous; with proper precautions, always harmless; in most instances, extremely beneficial; in some cases *positively cutting short the malady by a speedy cure.*" Thomas King Chambers, Honorary Physician to His Royal Highness the Prince of Wales, and Physician to St. Mary's and Lock Hospitals, says, in speaking of typhoid fever and the use of emetics in the early stages, that a considerable proportion of the cases may be *cut short* in this way, and he refers his pupils to cases under their own observation in the hospital wards which he thus treated, with the effect of at once arresting the morbid process, and establishing the period of convalescence. W. will perceive, if he does not already know, that the medical world are

divided in their opinions on this point, in other parts of creation as well as in Boston, and that heroic practice obtains elsewhere than in Franklin County, and also that the patients do sometimes "survive the treatment" notwithstanding.

Half a century ago, the doctrine that fevers could be broken up was the prevailing opinion of medical men high in authority. Guided by the light of observation and experience, and meddling very little with theories and delusions, they usually came to very correct conclusions. Are we willing to admit that physicians of to-day can accomplish less than our medical fathers of fifty years agone? It would truly seem so, if some of our teachers are correct in their opinions. But I am not alone when I advocate the doctrine of the olden time, and maintain that typhoid fever can be, in its formative stage, sometimes broken up, often rendered more mild in character, and shorter in duration. It is in the earliest and formative stage of fever, before the system has become generally contaminated, and in that period of the disease which in common parlance we style "coming down with the disease," that in my belief, founded on an experience of twenty-four years in a district particularly addicted to fevers, remedies can be used for cutting short the disease in question, and, as Dr. Brinton expresses it, "rendering it endurable." With the authority of medical men of great experience and reputation to sustain me, I know of no better reason to render for my views than facts gained by the light of experience. I have treated from thirty to one hundred cases of typhoid fever nearly every year for the past twenty-four years, and I have every reason to believe that, in many instances, I have seen the disease *broken up*, or if not at once arrested in its course, at least so modified as to render it more mild and manageable, and of shorter duration, by the prompt action of emetico-cathartics in the onset. I do not propose to inquire into the causes of typhoid fever, or upon what part or parts of the human economy the fever-poison first makes its impression. That the blood comes in for its full share of the first evils, I have very few doubts. Afterwards, in various lesions, the tissues of the body become secondarily affected. The fever-poison, whatever it may be (quite likely miasmatic), acts with gentle power at first, but obtains in time a full dominion. It is during the very first appearance of the typhoid symptoms, when the subject is yet going about with the leaven of the poison beginning to work, with pain in the head, languor, and weakness of the limbs, slightly furred tongue, accelerated pulse, &c. &c., and before the fever-poison has obtained a strong foothold in the system, that I have seen emetico-cathartics operate with such decided benefit. Emetico-cathartics, aided by collateral means, make a powerful impression upon the secernent and depurative organs of the body. I believe, in typhoid fever, they thus enable these organs to rid the system of the fever-poison, by eliminating it therefrom in part or in whole, either breaking it up or rendering it in many cases

where success is gained, more mild and manageable. Perhaps my statement that typhoid fever "very often" can thus be broken up or ameliorated was a little too positive; but that it may sometimes be done I have not the shadow of a doubt, and as emetics properly administered can hardly if ever do harm, is it not proper and right to endeavor at least to render the disease more mild and endurable by giving them in its onset?

When typhoid fever runs through a regular course, what becomes of the fever-poison? Is it gradually thrown off from the system, or does it lose its virulency by time and become inert? We know that a certain train of symptoms follow its presence, sometimes of a mild, sometimes of a malignant character. Why is this, if in some cases there is not the presence of a greater degree of the fever-poison? Circumstances go to show that the mildness or malignancy of a fever depends upon the amount of fever-poison present in the system. If, then, in the onset a portion of the miasmatic poison can be thrown off by proper remedies, is it not reasonable to suppose that the disease will be manifested in a milder degree? W. will probably say that the above statements are "very positive, but not very logical." Facts gathered from the light of one's own experience are quite as reliable as dogmatical theories trotted out by a double-horse team of logic. The doctrine that I advocate had able supporters fifty years ago. Its age certainly gives it dignity. It is advocated by some of the most eminent physicians of to-day, both in this country and in Europe. It is, then, not an obsolete or superannuated doctrine. D. Rice.

Leverett, Mass., January, 1866.

FISTULA IN ANO—OPERATION BY LIGATURE, MODIFIED.

By Dr. A. W. Thompson, Northampton, Mass.

[Communicated for the Boston Medical and Surgical Journal.]

The surgical device about to be described, by means of which the use of the ligature in the operation for fistula in ano has apparently been rendered more expeditious and effectual than in the way hitherto practised, has answered my expectations so well that, if new, it seems to me not unworthy to be submitted to the profession. I have resorted to it in cases wherein, by reason of complicating circumstances, the ligature has promised better results than division of the tissues with the knife. The desideratum was, to hasten the passage of the ligature through the flesh by tension towards the surface; and a weak spring of India rubber was used for the purpose. A single selected case will be reported, as affording greater clearness and brevity than a general description.

Case.—The patient, an unmarried lady, 22 years of age. Health excellent until two years ago. Has suffered for two years, and is

still suffering, from menorrhagia. Menstrual interval at present is three weeks, and the amount of flux inordinate and exhausting. Profuse leucorrhœa occupies the *interim* between hæmorrhages. In addition has, she says, "a running sore near the outlet from the bowels, left behind from a large gathering of matter which broke in that place."

Examination reveals considerable prolapse of the womb, with enlargement, tenderness, and slight ulceration of the os; also, *blind external* fistula in ano, neither the probe nor water from a small syringe finding their way into the rectum from the sinus externally. Debility, pallor, &c., as might be expected, extreme.

General treatment, mainly tonic, was pursued for a time, with perceptible good effect. The ulcerated os tincæ and the leucorrhœa were improved by applications of solut. nit. argent. and astringent vaginal injections. An attempt was made, *pari passu*, to obliterate the fistulous sinus by means of injections into its cavity of tincture of iodine and of "yellow wash" at different times. But this treatment, although sedulously applied, was of no avail. The capacity of the sinus was half a fluid ounce. Suddenly, it appeared from the free admission of a much larger quantity of fluid, non-resistance to the syringe, and the escape through the anus of the injection as fast as it was thrown into the fistula, as well as from the easy passage of the probe for the first time into the rectum, that between two days the internal septum had yielded, and that the fistula was now complete. The patient was by this time tolerating a Meigs's ring pessary, and suffering less, although still considerably, from uterine disease.

Operation.—For the relief of this fistula the ligature was preferred to the knife, in view of the uterine complication. Its track inclined towards the vagina, so that the finger in that passage seemed to be separated from the probe in the fistula by scarcely more than the mucous membrane. A ligature of four lengths of saddlers' silk having been introduced and left as tight as could be borne, on the first evidence of its advance towards the surface—slackness in the portion outside—a C spring of thin rubber, notched at its extremities that it might be held in place, was inserted under the loop of the cord, its convexity directed towards the skin and its notched ends receiving the cord strained into them by the action of the spring. As much strain was thus applied as the patient could endure. From day to day new springs were added, or longer ones substituted, as more and more of the ligature appeared outside, until in a few hours short of eleven days it dropped away and the cure was complete.

The spring is easily cleansed, absorbing no fluid, and admits of the application of poultices, which in this case were required.

Soft dejections were induced daily, mainly by the use of uncooked bran drunk somewhat freely in water or milk. The sphincter ani retained its power—even for the retention of gas—throughout; and

at the present writing—ten months since the operation—the patient declares herself to be, and to have been, free from troubles referable to the rectum. She is also better of her uterine disease; has married meantime; so there is hope that her condition may yet become *interesting*, even if that portion of her history sketched above has failed in the hands of the writer to merit that epithet.

CLINICS OF M. CIVIALE AT THE HOSPITAL NECKER, PARIS—ELECTRICITY IN THE TREATMENT OF DISEASE.

[From the interesting letters from Paris, by Prof. Charles A. Pope, published in the *St. Louis Medical and Surgical Journal*, we select the following.—Eds.]

It has been my pleasure, for some months past, to attend weekly, at the Hospital Necker, the cliniques of M. Civiale. During this time I have seen him perform a large number of his usual operations, such as urethrotomy, lithotripsy and lithotomy. In the crushing of calculi he is still unrivalled. The extreme care with which he examines his cases, and the wonderful ease, delicacy and precision which characterize his manipulations, have not diminished with his advancing years. Compliments in this respect, however, he generally declines, preferring that his great skill should be shared by all surgeons. His wish is to see lithotripsy practised by the whole profession, and not confined to a few. Forty years' observation and experience in an extensive and special practice could not fail to render him thoroughly proficient in all that concerns the diseases of the urinary organs. It must be recollected that in the diagnosis of these we are deprived of the use of sight, and are guided by the touch alone. Nor is the touch direct, for it is exercised through the medium of a long, metallic instrument. One's admiration, therefore, is enhanced to see with what accuracy he appreciates the various conditions of the urethra and bladder, the presence or absence of calculi, whether free or encysted, their size, shape, hardness and number, as well as the various tumors and polypi, their narrow or broad base, and, in short, all that concerns the pathology of these important organs. Yet, notwithstanding his ability, Civiale is always modest, and deprecates the rashness and presumption of those who claim to be absolute in their diagnosis and treatment of these difficult and often obscure complaints. The method and instruments are the same he has employed for the last thirty years. If there be one quality which characterizes him more than another, it is gentleness. This is his great watchword. He never inflicts useless pain, never fatigues his patients by prolonged operations, and always properly prepares them for the use of his instruments, which seem to glide of their own accord, and are of small size to admit of freer play. A favorite remark with him is, always to give the urethra

time to swallow the instruments, the wisdom of which is apparent to all who are familiar with such operations. His lithotripsical operations are almost perfect.

In nodulated strictures he still uses his own urethrotome, which cuts, as you know, from behind forwards, or from the bladder to the penis. Sometimes he incises the urethra for seven inches in extent; but generally he limits the incision to the mere nodosity. He prefers to act on the posterior wall of the urethra, whilst Maissonneuve almost always cuts anteriorly. Both are careful to introduce immediately an elastic catheter, which is retained for thirty-six or forty-eight hours.

In lithotripsy I have said that Civiale is unrivalled; but in lithotomy he is by no means expert. Blunt instruments along natural routes he thoroughly understands; but cutting instruments are out of place in his hands. My recollection of him would have ever been one of unalloyed pleasure and admiration, but for an unfortunate case of lithotomy which I not long since witnessed, in which he but too plainly evinced his want of surgical skill.

The patient was a man about 55 years of age—the stone being of rather large size. No chloroform was used, and, during the protracted operation, his sufferings were very great. A straight incision was made in the median line in front of the anus. The staff having been reached, a double *lithotome cache* was pushed into the bladder, and the blades having been made to project, the instrument was withdrawn. With the common lithotomy forceps an attempt was made to extract the stone, but failing, resort was had to a complex apparatus for crushing, or rather disrupting, the foreign body. This consisted of a large forceps, whose strong handles were forcibly approximated by a vice, through which and the joint of the forceps a perforating instrument like a gimlet and worked by a screw was introduced against the included stone, with the view of boring into it, and thus causing its disruption. After much time, labor and suffering, the operator succeeded in breaking off and removing a portion of calculus, more than an hour having been consumed in ineffectual attempts at extraction, during which both the surgeon and patient were thoroughly exhausted; the latter was removed to his bed, with the promise that the remainder of the stone would be taken from him in a few days. He died, however, on the second day, and the stone was removed after death. It constituted about two thirds of the whole mass. When entire it was ovoidal in shape, and would have measured about 2¾ inches in length by 2¼ inches in thickness. I have myself successfully removed a larger stone from a much smaller patient by the single lateral incision.

A worse operation I scarcely ever witnessed. Its plan was defective, as the direction of the outer and inner incisions were at right angles to each other, and its execution was unskilful. The surgeon did not give the ordinary forceps a fair trial; and if, as he

said, the stone was in the bas-fond of the bladder, which closely embraced it, why did he not introduce his finger into the rectum so as to facilitate the seizure? He seemed more intent in applying a sort of perineal lithotripsy through the wound; but, whenever this becomes necessary, it were preferable to resort at once to hypogastric lithotomy.

For his own reputation, and the good of his patients, it is to be hoped that the able lithotriptor will not often attempt the knife, but in cases requiring its use that he will hand them over to some more skilful confrère. Civiale seems to be about 70 years old. He is followed by a small class of from ten to fifteen students, the majority of whom are foreigners. He is said to be very wealthy, and pays, I have been told, six thousand francs a year for his service at the Hospital Necker.

At this same hospital I have occasionally seen the application of the *endoscope* in the hands of its inventor, M. Désormeaux. . . . . He has several times observed encysted calculi and different fungous growths contained in the living bladder.

More than twenty years ago the idea of looking into the bladder was entertained by Segalas and others, but fell into neglect until a few years ago, when M. Désormeaux revived and accomplished it. This gentleman certainly deserves much credit for his persevering efforts in this direction; and it is to be hoped that, through the instrumentality of his urethroscope or endoscope—for he applies it to the bladder and rectum also—valuable additions to our means of diagnosis and treatment may yet be effected. His pleasant manner and polite attention to strangers are quite remarkable, and enlist all such visitors in his favor.

Among the subjects which have greatly interested me during my sojourn in Paris is one which, although largely medical, has yet an important surgical bearing. I allude to the application of electricity in the treatment of disease.

M. Duchesne (de Boulogne), so well known by his writings on this subject, is always pleased to receive visitors at his consultations, where his numerous patients afford a fine field for study and observation. His collection of casts, photographs and specimens, microscopical and pathological, is very extensive and unique. No other, perhaps, has so well investigated muscular action. From the study of the muscles he was naturally led to that of the nerves which influence them. The various changes which take place in both the brain and spinal marrow, corresponding to the different kinds of palsy, are beautifully shown under the microscope, the views of which have been most successfully photographed. It was, I believe, M. Duchesne who first discovered that the muscles, which failed to respond to the influence of the will, were entirely susceptible to the influence of the electric irritation, and *vice versa*. This view, at least in the first proposition, has been confirmed by our own surgeons in

gun-shot injuries of nerves, as also by the experiments on animals which I have had the pleasure of witnessing at the *Collége de France*, by M. Claude Bernard, on the action of the Woorara poison.

In paralysis, the result of cerebral lesions, the muscular tissue, although atrophied from the want of use, undergoes but little other alteration, whilst in that dependent on changes in the spinal marrow, the fatty degeneration of muscles sooner or later ensues, and sometimes with great rapidity. The muscles which have undergone this fatty transformation are not susceptible to the electric influence. The larger number of cases of club-foot and club-hand are dependent on this latter condition, the transformation affecting one or more of the muscles of the limbs, so that, in these instances, tenotomy seldom does much good. If the whole tissue of a muscle have become transformed into fat, nothing can restore it. The loss, in this way, of the single *tibialis anticus*, M. Duchesne considers as more serious than that of all the other muscles controlling the motions of the foot. When thus singly affected, there is a resulting *pes equinus*, with eversion of the foot by the peronei muscles, and this deformity increasing with the growth of the patient, he at length walks on the inner ankle. Were, however, the effect general, i. e., embracing all the muscles of the leg, an apparatus can be worn, which, giving support to the joint, also keeps the foot in proper position, and thus diminishes both the lameness and the deformity.

A case of contracted little fingers was recently presented at the clinique of Nelaton, which M. Duchesne well showed to depend on the tendon of the flexor profundus. On the opposite arm of the patient the electric current, when applied to the superficial flexor, caused the fingers to bend only at the metacarpo-phalangeal articulation: whilst its application to the inner side of the arm, over the deep flexor, caused the additional bending of all the joints of the fingers themselves. The contrast in the flexion was very marked. M. Nelaton divided the tendon of the profundus in the palm of the hand, at its cubital margin.

On another occasion, at the same clinique, in attempting to show, on a freshly amputated leg, the accuracy with which any single muscle might be made to contract under the electric stimulus, M. Duchesne was not a little disconcerted at his incomplete success, which, at the moment, he could not explain. The cause of his failure was discovered afterwards to have been a pathological agglutination of the muscles, which prevented their separate action.

In a case of "painful flat foot," Nelaton, contrary to the opinion of M. Duchesne, divided the tendon of the long peroneus. The pain ceased for a time, that is, as long as the patient was quiet in bed. On using the limb, however, or on standing for some time, the pain returned, the patient stating that her condition was not at all improved. Having waited for the reparation of the divided

tendon, M. Duchesne applied his battery, the woman avowing her improvement after each application. He states confidently that in a short time she will be completely relieved.

In these cases it is the inefficiency of the long peroneus which causes the flat foot, being a sort of valgus; and the pain is owing to the unaccustomed pressure of the tarsal bones at the upper and outer part of the foot, where it is invariably found, at the depression of the cuboid bone and the astragalus. The arch of the foot also being destroyed, there results a painful compression of the plantar nerves.

There is, likewise, a pastry cook who had suffered in this way for many years. Although twenty years old, his pain had been entirely relieved by the electric current, and he is able to stand all day. Under its repeated use, also, there is an evident commencement of an arch to his foot.

There is a variety of paralysis, a marked specimen of which was exhibited in a boy, that M. Duchesne calls "*paralysie hypertrophique.*" The muscles of the legs, though weak, are over-developed in size. The upper and lower limbs of the paraplegic patient seemed to belong to different individuals, so great was their disparity. Several photographic pictures of other patients exhibited the same variety of this unusual paralysis. In its cure, the hypertrophied muscles become reduced to their normal size.

A woman consulted M. Duchesne, complaining of intense though transitory pains, shooting down the right thigh, and coming on at intervals for two or three days, and then disappearing for several months, to recur again in the same way. The arm of the same side was also somewhat affected. He remarked that such cases, in their incipiency, were very commonly mistaken for and treated as rheumatism or neuralgia, when, in reality, they were the precursory symptoms of a most grave affection. The case was one of what is called "*ataxie locomotrice progressive.*" The patient already presents other confirmatory symptoms in the amblyopia, dilatation of the pupil, and changes in the optic papilla, with inability to walk steadily with the eyes closed, all showing the cerebral trouble. The nitrate of silver has recently been much vaunted in the treatment of this affection; but, as there was a slight syphilitic taint, M. Duchesne entertained the hope of relieving his patient by means of the iodide of potassium and electricity, for, although the tactile sensibility of the limb was impaired, its electric sensibility and contractility were not.

M. Duchesne is now publishing a new work on his favorite subject. It is a field which, in a sense, he has made his own; and the patience and enlightened zeal with which he has cultivated it are deserving of all praise. It is to be hoped that his researches will lead to still further discoveries, and confer yet more important benefits on the profession and humanity.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JANUARY 18, 1866.

THE MODERN PLAGUE OF SERPENTS.—Everybody has seen or heard of the new chemical toy known by the name of "serpent's eggs." The passer-by sees them announced for sale in the windows of nearly every apothecary's shop in the city, or he is startled at every street-corner by peripatetic pictures of huge ophidian monsters with an unpleasantly near foreground of distended and fanged jaws, and with coils on coils running back into the dim perspective. This, the mature brood, is hatched from the "eggs" amid flames and gases, and is called "Pharaoh's serpents." Introduced from Paris, and now manufactured here also in large quantity, they are the fashionable novelty of the season. They are served up on china as a brilliant after-dinner course, are burned in place of the fragrant pastilles, which they resemble externally, in crowded drawing-rooms, and are touched off as harmless domestic fireworks in the nursery. It is not surprising that they should have become so popular, for it certainly does appear wonderful that so much apparent substance should lie shut up in so small a compass, and at the touch of fire should come writhing forth in serpentine coils. Enclosed in these little metallic eggshells, however, are embryos of a far more dangerous character than any described in works on Herpetology, and it needs but the magical generative power of heat to hatch from their comparatively harmless contents some of the most deleterious gases known in chemistry. It is the old fable of the peasant and the viper, and it is time that the public were informed of the poisonous nature of these serpents they are introducing into the family circle.

But, it may be asked, if they are so dangerous, why do we not hear of injurious effects produced by their use? Within a week a communication has appeared in reply to a case of such poisoning, reported by a physician in a public newspaper, from a manufacturer, stating that they are harmless, and may even be swallowed with impunity. A glance at their chemical composition, however, will convince any one of their real character. They are composed of sulpho-cyanide of mercury, a compound of sulphur, cyanogen and mercury. When heated to a high temperature combustion takes place, and in the decomposition which ensues, nitrogen, carbonic acid, sulphurous acid, cyanogen and bisulphide of carbon are given off in the form of gases, a large portion of the mercury is sublimed as vapor, and there remains a peculiar organic substance, consisting of nitrogen and carbon, and known in chemical works by the name of mellone. This it is which is cast forth from the miniature volcano in the form of a serpent.

Now one need not be a chemist to know that cyanogen, bisulphide of carbon and mercury are dangerous, poisonous substances, and that they cannot be mixed with the air of a room without injurious consequences to the persons breathing it. The explanation of the fact that serious results do not more frequently follow their use is that they are, fortunately, expensive, and are therefore generally burned singly. It is none

the less true, however, that inspired even in minute quantity such substances must be prejudicial to health, and that when set free by combustion in larger amount, in a small room, or in the presence of children, they may produce even a dangerous effect. We have several times experienced the suffocative character of their vapors, even in a large apartment. If people wish to play with such dangerous toys, they should at least observe the precautions practised under similar circumstances in chemical laboratories, of thoroughly ventilating the room. In view of these properties the Prussian government has forbidden private sale of them. We hope, therefore, that the public press will assist us in enlightening the community as to the character of "Pharaoh's serpents."

Our Editorial of last Week.—We learn that the impression on our minds while writing the editorial of last week, that the Female Medical School and the Female Hospital were directly associated with each other, is incorrect. There is not, we are informed, any organic connection between these institutions. The spirit which gave rise to and supports them both we believe, however, to be essentially the same. They both aim at giving to women the education and privileges of practitioners in medicine, and in doing so claim to hold a position in advance of the main body of the medical profession. As yet no graduate of the Female Medical School, nor any female physician, has been recognized, however fully qualified, as a regular practitioner by the Massachusetts Medical Society. Graduates of the School are attached to the Hospital as officers, and with them, of course, the gentlemen connected with the latter are ready to consult. This is the false position of which we complain, and which in our opinion ought to be changed. They have signed the Constitution and By-lays of the Society, agreeing to abide by their provisions. These provisions, to our minds, are clearly at variance with the ground they occupy. We have no quarrel with the institutions to which we have referred—the latter, we have no reason to doubt, is an active instrument of benevolence at the present time. But we feel that it should not be left in the ambiguous position in which it now stands, giving full license to any number of the medical profession here to quote the example of its consulting officers as an excuse for consulting with any irregular practitioner they may choose. It was for the purpose of bringing this unsettled question fully home to the minds of the medical profession that we have taken up this unwelcome subject; and nothing would give us individually greater pleasure than to be authorized by the State Medical Society to meet on terms of perfect professional equality such ladies as may see fit to qualify themselves properly for the duties and responsibilities of our arduous profession.

Foreign Intelligence.—The trichina disease is spreading in Prussia. The *Halberstadt Gazette* states that at Hadersleben, in the workman's barracks, out of 27 patients, 24 died. The Eichsfeld is a very poor district, part of which belongs to Hanover and part to Prussia, where most of the poor cottagers keep pigs. A butcher at Berlin sells spe-

cimens of live trichinæ at sixpence each, while the price of pork has fallen to about half that sum per pound.

M. Georges Ville thus classifies the varieties of fermentation :—1. Fermentation by the effect of contact, as in the decomposition of water by fibrine. 2. Fermentation by communication of motion, as in the reduction of oxide of silver by oxygenated water, the action of pectase upon pectine, and of diastase upon starch. 3. Fermentation by organic activity, as in the transformation of sugar into alcohol, carbonic acid, &c., under the influence of yeast.

At a recent meeting of the French Academy, M. Pouchet gave an interesting paper describing his several experiments upon the congelation of animals. He finds that, contrary to the usual supposition, no animal will recover if frozen beyond a certain degree. These are the more important generalizations he has framed :—1. The first effect of cold is to contract the capillaries. 2. The second is to alter the blood-corpuscles—those of mammals becoming crenated at the borders, and those of the lower animals setting free their nuclei, or exhibiting alterations of it without liberation. 3. The greater the extent of surface congealed the greater the danger, because of the larger quantity of decomposed blood-corpuscles. 4. The more rapidly heat is applied to a frozen part, the greater the danger to the subject, because the greater the rapidity with which the blood becomes charged with altered corpuscles. 5. In all cases of fatal congelation death is produced by stupefaction of the nervous system.

Dr. Halbertsma, the distinguished Professor of Anatomy and Physiology at the University of Leyden, and the author of many valuable contributions to human and comparative anatomy and to human craniology, recently died at Coblentz.

We have to announce also the death of Professor Forchhammer, the eminent geologist and mineralogist, of Copenhagen, and the author of several works on chemistry.

Prof. Fergusson has just been created a baronet. He has held the chair of surgery in King's College since 1840.

C. Schroeder Van der Kolk, son of the great anatomist, has just published a work entitled "Soul and Body," in which he endeavors to prove that what is called soul is simply the manifestation of brain, just as digestion is the function of stomach. He says memory, imagination, reason, and even volition, are but the result of physical actions, or electro-molecular, excited by the operation of perception—the contact with the outer world.

A very important discovery relative to the mode of propagation of epidemic poisons, has been made by Dr. Richardson. He has recently conducted a number of experiments which demonstrate that the organic principles of miasmatic poisons may be chemically separated from the blood of the diseased animal; and further, that this organic principle, after being united to an acid, and then precipitated as a base, is capable, when introduced into the secretions of a healthy animal, of producing the original disease. Dr. Richardson has isolated the organic principle of the poison of pyæmia, and, having converted

it into a salt, and then re-isolated it, has found it capable of producing pyæmia in healthy animals.

Chittenden County (Vt.) Medical Society.—The regular quarterly meeting of this Society was held at Essex Junction Jan. 2, 1866, the President, Dr. Benjamin Fairchild, in the chair.

Upon invitation of the President, Dr. Butler read a paper *On the Reciprocal Relations of Physicians and Patients and of Physicians between themselves*, which, on motion of Dr. Sprague, was directed to be presented to each of the county papers, with a request for its publication in their columns.

Dr. Cole detailed a case of *ascites*, in which he had performed the operation of paracentesis seven times and drawn away 280¼ pounds of water.

Dr. Thayer related a case of a patient whose urethra had been severed by a fall astride a fence, in which he had perforated the bladder thirty times in six months—generally through the rectum, introducing the catheter which he wore some time—once through the perinæum, introducing a canula, through which he urinated. In the same case, an operation for establishing a urethra failed, but no bad symptoms followed either of the operations.

Cases were also related by Drs. Fairchild and Miles.

The subject of the fevers of the past season gave rise to an interesting discussion, in which Drs. Thayer, Cole, Fairchild and Miles participated, giving the results of their observation in pathology and treatment.

Dr. Thayer introduced the following resolution, which was unanimously adopted:—

Resolved, That the members of this Society direct their attention to the sanitary condition of their respective districts, and report at the next meeting the results of their examinations, and make such suggestions as they consider necessary for the public health.

In the absence of the Executive Committee, the President invited Dr. Thayer to present the subject of *cholera* before the next meeting of the Society, and Drs. J. W. Miles and A. M. Plant to present such subjects as they may select. The next meeting occurs on the first Tuesday of April.

The meetings of this Society are exceedingly interesting and profitable, affording its members an invaluable medium of intercommunication and friendly intercourse. Those who attend such gatherings most constantly are best posted in professional knowledge.

Ventilation of Hospitals.—Dr. Gallard, of La Pitié, who has lately paid much attention to the ventilation of hospitals, has arrived at the conclusion that *natural* is far superior to *artificial* ventilation. At Hopital Beaujon, he says, has been in operation since 1856 Van Hecke's system of ventilation in the female surgical pavilion of that hospital; and yet statistics show that the mortality has, if anything, increased. In 1851, there was one death to 17·16 patients treated; in 1852, one to 16·26; in 1853, one to 14·48; in 1854, one to 13·81;

in 1855, one to 16·23; in 1856, one to 14.25; in 1857, one to 14·93; in 1858, one to 12·85; in 1859, one to 17·14; in 1860, one to 12; in 1861, one to 11·60; in 1862, one to 12·30. At Hopital Necker, where the same apparatus is in operation, the mortality has remained precisely as it previously was—viz., one in eight or nine patients. Then, again, we find still more striking results if we compare the mortality of La Pitié, where there is no artificial ventilation, with that of Lariboisière, where the most expensive system prevails. Lariboisière nominally contains 606 beds, but its average number is 634. La Pitié contains 620. Lariboisière is placed on a height, and stands in an open space. La Pitié is placed low; has muddy waters, tanneries, &c., around it; its superficial area is 21·7 *mètres*. Lariboisière has 51·8 *mètres*; its beds have each 52 to 53 cubic *mètres*, whilst those of La Pitié have from 25 to 49 only. These and other circumstances place La Pitié in a hygienic position greatly inferior to that of Lariboisière. And we should naturally be led to conclude that the mortality of La Pitié was greatest; but such was not the case. We find from statistical comparison of the mortality at the two hospitals since 1853, when Lariboisière was opened, that the mortality in both was much the same. During eleven years Lariboisière has received 100,718 patients, of whom 12,616, or one in 7·9, died; whilst La Pitié received 103,707, of whom 13,189, or one in 7·8, died. Facts like these, M. Gallard contends, show that artificial systems of ventilation of hospitals are, to say the least of them, useless. Then, again, it appears that during these years, in which statistics were taken, the average duration of diseases in Lariboisière is about two days longer than in La Pitié. It is needless to add, that the expense attending artificial ventilation is great. M. Gallard has often noticed an inconveniently high temperature in wards artificially ventilated. In Lariboisière, where the ventilator of Farcot is employed, the temperature is generally about 17° to 18° cent., and sometimes even above 20°, when 15° or 16° should have been the maximum. The original expenditure on the ventilating apparatus at Lariboisière was upwards of £16,000; and every year the expense of heating the hospital is more than £3,000, whilst that of La Pitié costs only £1,000.—*Medical News and Library*, from *British Medical Journal*, Sept. 23, 1865.

Ventilation of Sewers.—M. Robinet, a French chemist, has devised a means of freeing the sewers from the effluvia which escape in the attempt to ventilate them. He proposes that the furnaces of factories shall derive their supply of air from the sewers. The gases will be destroyed by combustion, fresh air from the atmosphere supplying their place. He calculates that if the combustion of only 70,000 tons of coal can thus be economized annually in Paris, or only a tenth part of what is burned there, the sewers will be supplied with about 140,000,000 cubic feet of fresh air—that is, more than seven times their contents—daily. He would apply the same principle to ventilation of cesspools, &c. It has been partially in use already, on the small scale.—*Ibid*, from *Scientific Review*.

Instantaneous Cure of Coryza.—An Army Surgeon, M. Luc, seized with very bad coryza, attended by fever, severe cephalalgia and

excessive secretion, determined upon trying the effect of the inhalation of iodine vapor. The coryza first appeared at 9, A.M., and the inhalations were commenced at 3, P.M., being repeated every three minutes during an hour, each lasting about a minute. The headache was first relieved, the sneezing then occurring seldomer, the amount of secretion diminishing, and by 6, P.M., all traces of the coryza had disappeared, except a little burning sensation in the throat. Several of the officers have since tried the means, with the same results. The inhalation is effected by placing a bottle of the tincture under the nose, the hand supplying warmth enough to vaporize the iodine.—*Am. Jour. of Med. Sciences,* from *Med. Times and Gazette.*

Massachusetts General Hospital.—At a meeting of the Trustees of the Massachusetts General Hospital, the following gentlemen were elected house officers for the ensuing year :—

On Surgical Side—Henry P. Quincy, Frederic W. Sturgis, Thomas Dwight, Jr., Richard H. Derby.

On Medical Side—Wm. L. Richardson, Henry Tuck.

Their term of service will begin on the 1st of May next.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, January 13th, 1866.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	40	43	83
Ave. mortality of corresponding weeks for ten years, 1853—1863	40.6	36.3	76.9
Average corrected to increased population - - - - -	00	00	83.78
Death of persons above 90 - - - - - - - -		0	0

Communications Received.—A Question that should be Settled.—On the Practical Uses of the Laryngoscope and the Rhinoscope.

Books and Pamphlets Received.—Lectures on the Diseases of Infancy and Childhood. By Charles West, M.D., Fellow of the Royal College of Physicians, Physician to the Hospital for Sick Children. Fourth American, from the Fifth Revised and Enlarged English Edition. Philadelphia: Henry C. Lea.—Annual Report of the Trustees of the Wisconsin State Hospital for the Insane.—Report of a Special Committee of the Board of Health of the City of Detroit, suggesting Measures for the Prevention of Asiatic Cholera, &c.—Report of the Surgeon-General of Massachusetts to His Excellency the Commander-in-Chief.—Report of the Board of Inspectors and other Officers of the Massachusetts State Prison.

Married,—At Savannah, Ga., 4th inst., Dr. A. C. Fowler, U.S.N., to Miss Elizabeth H. B. Hatch, of Medford, Mass.

Died,—In Troy, N. Y., Thomas W. Blatchford, M.D., aged 71—one of the oldest and most respected citizens of that place, and widely known as a leading member of the medical profession in the State of New York and an able writer.

Deaths in Boston for the week ending Saturday noon, January 13th, 83. Males, 40—Females 43. Abscess, 1—accident, 2—apoplexy, 4—disease of the brain, 4—inflammation of the brain, 1—bronchitis, 2—burns, 2—cancer, 1—consumption, 14—convulsions, 2—croup, 2—diarrhœa, 1—diphtheria, 2—dropsy, 3—dropsy of the brain, 3—scarlet fever, 2—typhoid fever, 3—disease of the heart, 3—infantile disease, 2—intemperance, 1—disease of the kidneys, 1—congestion of the lungs, 1—inflammation of the lungs, 5—marasmus, 2—old age, 1—paralysis, 1—premature birth, 4—disease of the prostate, 1—puerperal disease, 1—smallpox, 3—disease of the spine, 1—stricture of the œsophagus, 1—unknown, 5—whooping cough, 1.

Under 5 years of age, 31—between 5 and 20 years, 11—between 20 and 40 years, 17—between 40 and 60 years, 11—above 60 years, 13. Born in the United States, 63—Ireland, 17—other places, 3.

THE

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LARYNGOSCOPY IN CASES OF TUMOR INVOLVING THE RECURRENT LARYNGEAL NERVE.

[Read before the Boston Society for Medical Improvement, and communicated for the Boston Medical and Surgical Journal.]

BY HENRY K. OLIVER, M.D.

THE phenomena excited by the pressure of tumors upon the intrathoracic organs are familiar to every physician. These are referable to the respiratory system and voice, the function of deglutition, the venous circulation and the arterial pulse. In the present paper I shall refer only to the first two of the phenomena above mentioned, and of these shall dwell particularly upon the effect produced upon the functions of the vocal apparatus. Before, however, proceeding to the consideration of the subject of an addition to the means of diagnosticating thoracic tumors, and as an interesting and fitting preliminary to that subject, I shall refer to a case of thoracic aneurism, in which I had the opportunity of seeing, by the aid of the laryngoscope, the changes produced in the larynx by pressure upon the pneumogastric and recurrent laryngeal nerves.

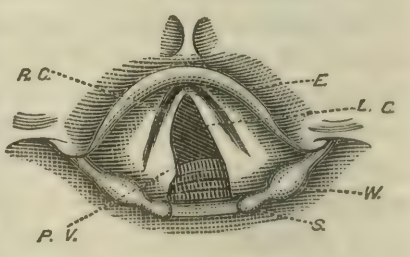
In November, 1864, there came under my care a man who exhibited a tumor bulging through the upper part of the sternum, the record of whose case I afterwards read before the Society, in connection with the minutes of the autopsy made by Dr. Ellis, to whose care, at the Massachusetts General Hospital, I had advised the patient to commit himself. For the details of this case I refer the members of the Society to the *Extracts from the Records of the Society*, published in *The Boston Medical and Surgical Journal*, Vol. lxxii., p. 18. At this time I shall refer only to the chief points in the record of the case itself and of the autopsy.

When I first saw Watson, the patient referred to, namely, on Nov. 3d, there was no doubt of the existence of a tumor which was pressing upon important nerves and vessels. There was also little doubt that this tumor was an aneurism, either of the aorta implicating the arteria innominata, or of this latter vessel itself. The appearances exhibited by the tumor; the pain shooting from the shoulder up the side of the neck; the inequality of the pulse at the wrists; the

hoarseness and dyspnœa, paroxysmal in their character, all served to make the diagnosis easy. The patient died, of exhaustion, Dec. 5th, and at the autopsy an aneurism was found just at the point of origin of the arteria innominata, and seeming to belong to it rather than to the aorta. The tumor pressed forwards through the sternum, and backwards flattening the arteria innominata itself, and compressing the pneumogastric nerve, the right primary bronchus and the œsophagus. In the minutes of the autopsy no mention is made of the recurrent laryngeal nerve, and it was probably implicated in the tumor in such a manner as to escape observation after the parts were removed from the body.

On two occasions before the patient's entrance into the hospital, I made a laryngoscopic examination, and I copy from my note-book the description of the appearances presented, and offer also a woodcut, copied from the drawing I made at the time.

Upon examination with the laryngoscope, on Nov. 23d, the right vocal cord was seen to be slack,* making a curved line from the anterior insertion, which in this case was visible, to the arytenoid cartilage. This cartilage lay considerably nearer the median line than its fellow of the opposite side, and the processus vocalis stood out quite prominently into the aperture of the glottis. During respiration, no movement of the right vocal cord took place, while on the left side the cord swung to and fro with inspiration and expiration.† Upon an attempt at phonation, the left cord approached the median line; the right cord also moved, so that the arytenoid cartilages came together pretty well, the cartilages of Santorini also touching one another. The right vocal cord did not, however, become tense, and its vibrations, as might be expected, were very coarse. There seemed to be, moreover, a somewhat general injected condition of the mucous membrane lining the interior of the larynx, although this was not very marked.



In the cut subjoined, E is the epiglottis; S. the cartilage of Santorini surmounting the arytenoid cartilage; W, the tubercle of Wrisberg; P V, the processus vocalis; R C, the right vocal cord; L C, the left vocal cord. Through the glottic aperture are seen rings of the trachea.

It will readily be seen that with such a condition of the parts an altered state of the voice was inevitable. A slight degree of hoarseness might have been occasioned by the abnormal condition of the mucous membrane, but the excessive hoarseness which existed in

* It will be remembered that in the laryngoscopic mirror the parts are reversed, that which appears to be the right side being really the left.

† I have noticed that this movement, studied particularly by Prof. Dalton in his experiments on the lower animals, is not uniformly present except where, from some cause or other, the respiratory movements are hurried.

this case was evidently due, as could be seen in the mirror, to the slackened condition of the right vocal cord.

I shall here offer a few remarks and cite some cases, to show in what manner the laryngoscope may aid in the diagnosis of thoracic tumors. Cases of such tumors are not rare, in which the closest examination of the chest has for a long time, and even up to the time of death, failed to detect the actual cause of the symptoms presented, and although in many cases, perhaps in most, the fact that a tumor of some kind exists is easily made out, in others there is the greatest doubt whether the laryngeal symptoms are due to inflammatory action in the larynx itself, or to irritation of the recurrent nerve. The best, and, before the invention of the laryngoscope, almost the sole aid in cases where only laryngeal symptoms were present, was the rule indicated particularly by Dr. Stokes, viz., in the alteration dependent on laryngeal disease, the hoarseness or aphonia is constant; while in the functional affection of the voice from pressure on the recurrent nerve, remarkable variations in the tone and power of the voice frequently occur within short spaces of time. I may mention also the stress laid by Stokes on the loud, ringing cough. Instances, however, are on record in which tracheotomy has been performed for acute laryngitis, when the symptoms depended upon aneurism of the thoracic aorta. Dr. Watson mentions such an example.*

Of cases bearing on this subject, Liston's is perhaps known to most of the members of the Society. Dr. O'Ferral, in vol. vii. of the *Medical and Chirurgical Review* of Edinburgh, in connection with the relation of an obscure case of aneurism, says that after an unusually careful examination of Mr. Liston's chest, not the slightest symptom could be found looking to the presence of aneurism.

I proceed to mention other cases pertinent to this subject.

In the London *Medical Times and Gazette*, Vol. xlix., I find one or two articles which I shall copy at some length, as affording excellent arguments in favor of the employment of the laryngoscope in doubtful cases of the kind under consideration.

The first article is on page 33, and is a report of hospital practice, the case brought up being under the care of Dr. Geo. Johnson, one of the best English laryngoscopists.

"*Aneurism of the Arch of the Aorta, compressing the Vagus and Recurrent Nerves, and causing Symptoms of Laryngitis. Diagnosis by aid of the Laryngoscope.*

This case is a good illustration of the occurrence of laryngeal symptoms in thoracic aneurism from pressure on the recurrent laryngeal. It shows, too, the great practical value of the laryngoscope in affording the negative evidence that there was no actual disease

* It should be mentioned in this connection that a tumor may so obstruct the veins leading from the larynx as to cause a dropsical condition of the laryngeal mucous membrane, and this to such a degree as to demand the performance of tracheotomy.

in the larynx. In all cases of laryngeal dyspnœa, especially when the dyspnœa is paroxysmal, the chest should be carefully examined; and, indeed, when there are merely symptoms of laryngitis, or even altered pitch of voice, it should not be omitted. "It cannot," says Dr. Gairdner, "be too strongly insisted on, that a physical examination of the chest should take place in all cases of supposed laryngeal disease." But sometimes an examination of the chest does not give us definite information, as in Dr. Johnson's case. To quote again from Dr. Gairdner's paper:—"The absence of the physical signs of aneurism or tumor should not suffice to remove completely the suspicion that they may be concerned in the affection of the larynx." In such cases the laryngoscope supplies a real want.

J. H., aged 31, a hawker, of intemperate habits, was admitted, under the care of Dr. George Johnson, into King's College Hospital, July 16, 1863. About seven weeks before his admission, after being out drinking all night for five nights in succession, he first experienced a sensation of "stoppage in the throat," and lost his voice. The throat symptoms continued more or less until the time of his admission. For eight days prior to admission he had experienced a difficulty in swallowing solids. For five days the voice had become more husky; he had cough and difficulty of breathing, and the breathing was attended with a loud noise in the throat.

The symptoms on admission were cough, with dyspnœa and noisy laryngeal breathing, hoarseness, and difficulty in swallowing solids. He states that sometimes the noise in his throat entirely ceases, and he partly regains his voice, but the noise is usually louder while he is asleep.

On laryngoscopic examination by sunlight, the mucous membrane of the larynx was seen to be slightly congested, but there was no swelling; the arytenoid cartilages were freely movable, and the glottis opened wide during inspiration. At the time of the examination, the breathing was not stridulous.

It was evident (Dr. Johnson remarked) from this examination, that the laryngeal symptoms were not the result of laryngitis or other structural disease in the larynx. Aneurism of the aorta, or other source of pressure on the recurrent nerve was suspected and carefully sought for, but there was no physical sign of aneurism, no dulness on percussion, and no pulsation or morbid sound; the pulse was equal in the two wrists.

On the 18th, two days after his admission, he spat up a few mouthfuls of florid blood and felt rather faint at the time.

On the 20th, at 1.15, P.M., he suddenly became faint, and brought up, apparently by vomiting, about three quarters of a pint of florid blood. When Dr. Johnson saw him, at 1.45, he was still pale and faint, as if from internal hæmorrhage. No more blood had been brought up, but on percussion over the stomach there was marked dulness, and it seemed probable that the stomach was becoming fill-

ed with blood. He was directed to swallow constantly small pieces of ice. He continued to sink gradually, and died at 5, P.M.

On examination, twenty-three hours after death, an aneurism about the size of a small orange was found at the back of the transverse portion of the arch of the aorta. The aneurism had opened backwards into the œsophagus by an oval aperture three quarters of an inch long and half an inch wide, the opening being partly covered by coagula. The stomach was filled with blood. The left pneumogastric nerve passed in front of the aneurism and was somewhat flattened in doing so. The recurrent nerve passed behind the tumor in its course upwards to the larynx. Both the pneumogastric and its recurrent branch had evidently been stretched and compressed by the aneurism."

In the same number of this journal, p. 34, is the report of another interesting case, which occurred at the London Hospital, and which I here copy in part.

"Thomas D., aged 30, well nourished, and of considerable muscular development, but having large arcus seniles, applied at the hospital Dec. 1, on account of a burning pain in the chest. On inquiry, it was found that lately he had several times spat up a few teaspoonfuls of blood, altogether about a cupful. His appetite was good, and there was nothing to indicate disease of the digestive system. A careful examination of the chest failed to detect any signs of cardiac or lung disease, nor could any aneurismal tumor or abnormal bruit be detected, and there were no signs of venous obstruction (from pressure on the large trunks).

This pain had come on quite suddenly, about a fortnight before he came under notice, and he compared it to a feeling "as though he had swallowed something too hot." At the time that he first felt the pain, his voice became suddenly very hoarse and weak, and it has since become shrill and feeble. He continued his work for a day or two after he first felt the "burning," but his occupation (that of a dock laborer) aggravated the pain so much, whilst it caused him at the same time to make a "crowing noise in his throat," that he was obliged to desist from all labor.

A laryngoscopic examination was made by Dr. Morell Mackenzie, who gave the following report:—

The larynx is quite free from structural disease, and there is not the slightest congestion of the mucous membrane. On inspiration, there is a very slight difference in the position of the vocal cords—the left being a little nearer to the median line than the right. On the left side, also, the capitulum Santorini is a little nearer to the median line, and on a rather higher level than its fellow, and the same observation applies to the left aryteno-epiglottidean fold and its contained cartilage. This condition of the left side of the larynx is not so marked as in the other cases of unilateral spasm of a vocal cord that have come under my notice; but it must be remarked that, in

this instance, neither of the vocal cords is so much drawn aside in inspiration as is commonly the case; this fact would account for relative differences between the two sides being less marked than is usual. On gentle phonation, the left vocal cord is observed to remain fixed, whilst the right advances well to the median line; a small space remains between the vocal cords. On forced phonation, the right vocal cord crosses over the middle line, so that its inner edge touches the left cord. When the vocal cords are approximated in this way, the whole of the right cord, but only about one third of the breadth of the left true cord, can be seen. It was carefully noted that this appearance was not due to any difference in the size of the false cords; that is to say, the left true cord was not at all eclipsed by the false cord on the same side. The patient can only speak in a high-pitched, squeaking voice, of a somewhat falsetto character.

It may not be out of place to observe that the long-recognized relation between aneurism of the arch of the aorta and an altered tone of voice was first proved with the laryngoscope to depend on paralysis of the left vocal cord, by Professor Traube, of Berlin. Cases also have since been observed by Drs. Semeleder, Smyly and others. In Traube's case, besides an immobile condition of the left vocal cord, there was hyperæmia of the false cords and epiglottis, and of the mucous membrane over the arytenoid cartilages.

Subsequent to this report the patient has become worse, and now the left pulse is decidedly fuller than the right, and there is a very slight systolic murmur, but only to be heard at the apex of the heart. The chest has been examined very many times, but no physical signs of aneurism have been found. There has never been the least difference in the pupils. Taking into consideration all the circumstances of the case, the spasm of the left vocal cord may not unreasonably be thought to depend on pressure of the left recurrent nerve by a thoracic tumor: that the thoracic tumor is an aneurism of the arch of the aorta is very probable. This patient's voice has gradually altered from hoarse to squeaky."

Following these two reports of cases comes, in the number of the *Medical Times and Gazette* of Jan. 16, a letter from Dr. Gairdner, which I also copy:—

"*To the Editor of the Medical Times and Gazette.*

Sir,—I have just perused in your journal of this day, the interesting records of two cases of aneurismal disease, detected mainly by laryngoscopic examination. I am able to add to them a brief statement, not, indeed, of a case of aneurism, but one of tumor, in which this modern addition to our means of diagnosis was of great service. Some months ago I was consulted in the case of a lady, who, for ten years or more, had had a moderate sized goitre-like swelling closely applied to the lower part of the trachea, and extending into the anterior mediastinum.

As the neck was very short and thick, owing to the obesity of the patient, the diagnosis was rather difficult; and as a suspicion had formerly existed of disease of the heart, on account of which she had at one time consulted Sir James Clark, there was a further uncertainty as to the cause of her symptoms. These were—1. A degree of difficulty of breathing and cough, almost equally divided as to characters between thoracic and laryngeal. 2. An alteration in the tone of the voice, and a slightly stridulous inspiration. 3. Expectoration of frothy mucus, just tinged, on one or two occasions, with blood. These symptoms were for the most part recent, the goitre having for many years caused her no inconvenience.

I have fully discussed the importance of these symptoms as indicating aneurism, in my "Clinical Medicine," referred to by your reporter. In this instance, no clear evidence of thoracic disease could be detected, except a slight prolongation of the first sound of the heart, which might very well be regarded as functional. I therefore viewed the symptoms as probably dependent upon the implication of the recurrent, on one or both sides, in the goitre, or in the surrounding thickening of the cellular tissue. The nature of the goitrous swelling being obscure, and the influence of remedies upon it uncertain, the prognosis was grave and anxious. I need say nothing about the treatment. The sudden death of the patient, some time afterwards, fully justified the prognosis, and a *post-mortem* examination, rather hastily conducted, but still practically complete and satisfactory, showed that an apparently carcinomatous degeneration of the thyroid gland was the true cause of the symptom.

The case occurred during Dr. Czermak's visit to Glasgow, and he had an opportunity of examining the larynx during the life of the patient. The parts brought into view by the laryngoscope were all perfectly sound as regards structure and anatomical relations. But the left vocal cord was absolutely motionless in inspiration, and in the formation of the voice. This observation was regarded both by Dr. Czermak and the physicians primarily engaged, as affording complete confirmation to the diagnosis of a tumor implicating the recurrent nerve.

I have for many years habitually employed a rather long forefinger in the exploration of the larynx down to the glottis, and by the method of touch have usually found it easy to acquire valuable information in regard to the state of the vocal cords and arytenoid cartilages in doubtful cases of this kind. I have rarely, if ever, found an exception to the rule, that well-marked laryngeal stridor or cough with imperfectly closed glottis, indicates a tumor pressing on the recurrent, if the epiglottis and glottis are normal. It is partly by giving us greater assurance on this point, and partly by developing the positive proof of inequality of movement on the two sides of the glottis, that laryngoscopy may be expected to assist our diagnosis of a difficult and doubtful class of cases."

I have only a few words to add to what has already been said. In regard to the appearances which are presented in the interior of the larynx when the recurrent nerve is undergoing pressure, these may vary considerably. It has been already intimated that the laryngoscope may detect no abnormal appearances whatever. In such cases the laryngeal symptoms are produced, it may reasonably be inferred, by the irritation of a nerve which is suffering only slight pressure. On the other hand, not only is partial loss of power of the laryngeal muscles often found to exist, but sometimes a complete paralysis is noticed. It is certainly a gratifying circumstance that we are no longer obliged to content ourselves with classing indiscriminately all the abnormal laryngeal phenomena under the indefinite head of functional disturbance, but that we may see pathological changes in the larynx when they exist, and note the manner in which these phenomena are produced. In the patient Watson's case, without the aid of the laryngoscope, we must have explained the hoarseness in very general terms, as consequent upon irritation of the recurrent nerve; with the aid of this instrument, we find a simple mechanical cause for this departure from the normal state in the slackened condition of one of the cords; such a want of tension causing coarse vibrations during phonation, and necessarily a rough, hoarse voice. Had such a state of things been found existing, even if all other symptoms of aneurism had been wanting, and a physical examination of the chest had failed to detect the tumor, we should, I think I may safely say, have been fully justified in concluding that a tumor of some kind or other was being developed, and should have been able to locate it in the course of the recurrent nerve.

I must not forget, before I close, to mention the fact that in very rare instances the recurrent nerve has been found pressed upon by a tumor, when during life no laryngeal symptoms were exhibited. Such an instance is mentioned by the reporter of Dr. Johnson's case, already referred to. At the autopsy, the nerve was found to be "flattened out," and yet the patient's voice had been clear to the last. "It may be," says the reporter, "that the pressure had affected the nerve very gradually, as we know that there is a remarkable difference in the effect of gradual and of sudden pressure on nervous tissue."

THE CHOLERA AS IT APPEARED AT THE PORT OF NEW YORK IN 1865.

By J. Swinburne, M.D., Port Physician.

The "Atlanta," an English mail steamer, iron-built, of 325 feet in length, and 36 feet beam, with two first and second cabins fore and aft on the deck, and three separate steerages of 98, 80 and 70 feet

in length, and 8½ to 9 feet in height, sailed from London on the 10th of October, with a full cargo, and 28 cabin and 12 steerage passengers.

London was at that time perfectly healthy.

On the 11th she arrived at Havre, remaining only one day and receiving 24 additional cabin and 540 steerage passengers, mostly from Switzerland, the southern part of Germany and eastern France, all, with few exceptions, passing through Paris on their way to Havre, some remaining only a few hours, others for days in the metropolis, when already at that time cholera was reported to prevail, though to a limited extent and of a mild type. Among these were two families from Germany, who remained a day at the hotel, "*City of New York*," at Paris, and five days at the "*Weissen Lamm*" and "*Hullgarder Hof*," in Havre. While at these hotels, emigrants who had arrived only a few days before them were taken ill, visited and attended by government officials, and by their orders sent to the hospitals.

The "Atlanta" sailed again on the 12th of October.

On the 13th the first death from cholera occurred in the person of a little child in the family from the "Wiessen Lamm."

On the 14th, 16th, 18th, 19th and 22d, five deaths from cholera occurred in one family from the "Hullgarder Hof."

On the 22d, a friend of the family, also from the Hullgarder Hof, but in the 2d steerage, sickened, and died on the 24th.

On the 28th, the first case occurred in the 3d steerage; 3 of the emigrants from London were taken ill on the 30th, all of whom, however, recovered.

When the Atlanta arrived, the surgeon reported 60 cases of cholera and 15 deaths during the passage; two more died after her arrival in port, and 6 out of 42 cases admitted on board the hospital ships, making a total of 102 cases and 23 deaths. Of the 42 cases treated in the hospital, 22 were admitted on the 6th; six on the 7th; two on the 8th; seven on the 9th; two on the 15th; three on the 16th; one on the 19th.

From the first case, the disease presented the uniform symptoms pathognostic of Asiatic cholera, and although in comparatively few cases terminating fatally, the same virus produced the milder forms of disease, which destroyed life in twenty-four or even twelve hours.

The "*Hermann*," which sailed from Havre at the same time with the Atlanta, arrived at the lower quarantine on the 26th of November. The physician in charge reported 7 deaths—4 children, 3 adults. The former he reported to have died of diarrhœa and inanition; the 3 adults of disease of the heart, inflammation of the bowels, and premature parturition after a few days illness. Singular, however, that the first death occurred in the very family who had lost the mother at the Hullgarder Hof at Havre, and whose disease and death, after thirty-six hours illness, the illiterate pea-

sant, her husband, so graphically described, that no doubt whatever could exist that she died of cholera asphyxia.

The "*Cella*," of the same line of steamers, arrived on the 20th from Havre with 360 passengers of the same class, and from the same region of country, but no case of sickness or death was reported during the passage and on arrival.

The "*Mary Ann*," an American bark, from Havre on the 25th of October, arrived on the 12th of December. The captain reported 5 deaths during the passage—4 from cholera; the first died on the 28th of October, the three others on the 3d, 4th and 5th of November, after an illness of one to two days duration. On a small vessel, with a deck scarcely six feet high, and crowded to its utmost capacity, and without any special care or prevention, the disease disappeared, and all on board enjoyed good health for thirty days previous to her arrival in port.

The "*Harpswell*," which sailed on the 28th of October, a few days after the "Mary Ann," lost seven infants during the passage, but no cholera cases occurred. Equally exempt were the two first class steamers "*Europe*" and "*America*," with passengers directly from Paris, where the majority had resided for some time previous.

That cholera prevailed in Paris, and to some extent in Havre, has been admitted by all, and what is still more significant, the "Atlanta," "Mary Ann," "Hermann" and "Harpswell," had each names on the passenger list which were not among the passengers, but reported to have been sent to the hospital by the local authorities at Havre. The clean bills of health were unquestionably issued by the same spirit which reported 200 cases at Paris at a time when upwards of 300 daily died of cholera.

Although the appearance of cholera was not unanticipated in the port of New York, no facilities whatever were prepared for an efficient quarantine. The Atlanta was immediately, upon arrival, sent to the lower bay, the surgeon of the vessel relieved, and as soon as the hospital ship could be prepared and the weather admitted of the removal of the sick, they were all, and as they occurred, transferred to the hospital ship; the baggage of the passengers was opened and aired; the soiled linen washed, and baggage, bedding, and personal effects of every kind subjected to fumigation in cool chambers prepared for that purpose. This fumigation was effected by a mixture of black oxide of manganese, common salt—equal parts, well moistened—and the addition of sulphuric acid, one part to four. The generation of gas was so abundant that one of the hands of the boat could only be restored with difficulty and after hours' attention, from the effects of inhaling the gas, four hours after fumigation had commenced.

The quarantine of passengers has been decried as barbarous and inhuman; and certainly none would be more anxious to grant them better accommodations than the officer in charge. When we, how-

ever, consider that the disease is not in the vessel, but among her passengers, and will necessarily accompany them wherever they go, that the accommodations on board the vessel, if scanty, are at least adequate to their wants and such as they are accustomed to, the neglect of the authorities to provide proper accommodations, though not less fragrant, was at least shorn of its alleged inhumanity and barbarity; in fact, that debarcation does not eradicate the disease, any medical man will admit, and as an instance in proof, I may mention the case of the "North America" in 1854. Cholera existed on board of that vessel two weeks before her arrival in port. Ten of her passengers had died during that time, and seven cases were sent to the hospital on her arrival. The day following, all her passengers were landed. In three days, 128 cases and 32 deaths occurred among 250 passengers, while the crew remained perfectly healthy, and no new cases could be traced to the vessel.

The passengers of the "Atlanta" received pratique ten days after the occurrence of the last case, and the vessel, a few days afterwards, was thoroughly cleansed and repeatedly fumigated.

As facts are the only true basis of inference, I have limited my observations to simple recital of facts. Facts alone can guide us in a practical rational quarantine, and however much even medical men may differ as to the mode of its administration, all, I think, must agree upon the necessity of quarantine, both of sick and exposed.—*Medical and Surgical Reporter.*

Bibliographical Notices.

Chloroform; its Action and Administration. By Arthur Ernest Sansom, M.B. Lond. Philadelphia: Lindsay & Blakiston. 1866. Pp. xii., 279.

Of the twenty chapters of this book, seven discuss the dangers of chloroform, the nature and mode of death from its use, and the methods of resuscitation therefrom. This ought to be its all-sufficient commentary.

One of the warmest and most polemical advocates of chloroform, Mr. Charles Kidd, in September, 1865, conceded 250 deaths to have been caused by chloroform.* Mr. Sansom, remarking that it has been impossible to obtain the records of all the fatal cases, admits but 109, that being the number the facts of which have been collected by the

* The Philadelphia *Medical and Surgical Reporter*, Jan. 13th, 1866, quotes Mr. Kidd as saying, "that during this year (1865) he had extracted notes from various newspapers and medical journals of over a dozen deaths by chloroform, 'deaths lying *perdu*, as it were, or hidden, but all bearing out the views of 250 others that he had in vain collected and offered the British medical and other weeklies.'"

recent Chloroform Committee of the Royal Medico-Chirurgical Society. In these death occurred

Before the full effect of chloroform was obtained, in - -	50
During the effect, in - - - - - - - - - - -	52
At a period not stated, in - - - - - - - - -	7
	109

In 72 instances the victims were males and in 37 females. In 62 cases, the chloroform was administered for "minor causes."

In explanation of these striking statements, the author says, "Nature provides in disease a gradual depression of the functions; an accommodation by degrees to a less perfect life. An animal which has been gradually accustomed to breathe an impure atmosphere will continue alive, though another healthy one plunged therein will die immediately." We fail to perceive the force of this theory, but Mr. Sansom argues that hence "the feeble bear chloroform better than the strong; children are the best subjects of all; women are better than men; men are most prone to death when they are in the prime of life; and when they are debilitated by pre-existing disease their chance is better than when they submit to chloroform for trivial causes in more perfect health and strength; and, further, the chance of ultimate recovery is greater when an operation is done under chloroform for a diseased condition than when it is undertaken for an injury."

The indiscriminate administration of chloroform is asserted to be dangerous; the intemperate, those having fatty hearts, the nervous and hysterical, and those suffering under shock of the nervous system are pronounced by Mr. Sansom to be especially prone to suffer the accidents of chloroform administration.

"Experiments upon the lower animals, equally with observations on man, prove that there is but a narrow limit between that strength in which the vapor may be safely inhaled and that which is likely to produce alarming symptoms, if not death." "Consequently nothing but the most approved inhaler should ever be used, and an atmosphere containing four and a half per cent. of chloroform is all that can with safety be employed; this ratio should be sustained by mechanical means and by no guess-work contrivances." "In thirty-six deaths the average amount of chloroform used was 1.7 drachms."

We have selected these paragraphs for citation to show that the book furnishes us with no new ideas of chloroform, or affords any reassurance in its use. On the contrary, it adds to our pre-existing fears; it appals us by the dangers it describes; it intimidates by the extreme caution demanded in its exhibition, by the failure of the greatest care to avert a fatal result.

The compromise adopted by the Chloroform Committee above alluded to, accepted and approved by Mr. Sansom, of a mixture of sulphuric ether and chloroform, is, we conceive, if not a triumph on the part of ether, at least a tacit condemnation of chloroform. That Committee remark that "it is quite possible that at some future time an anæsthetic may be discovered which will fulfil the required condition yet more perfectly than these mixtures." That discovery was made on the 13th of Sept., 1846 (at 19 Tennant's Row, Boston, Mr. Sansom has it), and has been in daily use since Nov. 7th, of the same year, when the first capital operation in which pain was totally

annulled, was performed at the Massachusetts General Hospital, one year, less three days, before the anæsthetic properties of chloroform were discovered. From that day to this not a single unavoidable accident has resulted in its use, nor has it ever failed, in hands familiar with its administration, to produce complete, satisfactory and perfectly safe anæsthesia. The converse of all which relates to the danger of chloroform is true of ether. Where chloroform threatens, sulphuric ether affords entire immunity from danger, and where chloroform is safe, sulphuric ether is safer; and if, as stated by Mr. Sansom, six minutes is the average time required to accomplish anæsthesia by chloroform, one of the chief arguments hitherto urged in its favor, as compared with sulphuric ether, is destroyed, since that is a liberal allowance of time to easily effect a thorough etherization.

In this connection, and as bearing on the question of the practical use of ether, the recently published statistics, contained in "Circular No. 6, War Department, Surgeon General's office, Nov. 1, 1865 (p. 87), are interesting. It appears that the reports of 23,260 surgical operations have been consulted in regard to the employment of anæsthetics. "Chloroform was used in 60 per cent. of these, ether in 30 per cent., and in 10 per cent. a mixture of the two was administered (in 40 per cent. a more bulky anæsthetic than chloroform was adopted). At the general Hospitals, the greater safety of ether as an anæsthetic was commonly conceded. It was often employed, and no fatal accident from its use has been reported. In the field operations chloroform was almost exclusively used. In seven instances fatal results have been ascribed with apparent fairness to its use. Detailed reports of these unfortunate cases are on file."

We have only to say, in conclusion, that Mr. Sansom appears to have written a complete and candid treatise on the subject of chloroform. We regret to think that a firm, usually so judicious, should have deemed it for their interest to reprint the book, or that there are in the United States enough persons so blind to their own interests and the safety of their patients, as to purchase even a small edition. Would the public, by purchasing, endorse the propriety of publishing an essay on the "domestic uses of gunpowder," or on "camphene and its admirable adaptation for kindling fires"? The book is well printed and on good paper, but it should have been bound in black, with a "death's head" stamped on the covers, as apothecaries label their laudanum when they dispense it in phials.

On Wakefulness. With an Introductory Chapter on the Physiology of Sleep. By William A. Hammond, M.D., &c. &c. Pp. 93. Philadelphia: J. B. Lippincott & Co. 1866.

A good portion of this valuable little monograph appeared last summer in the *New York Medical Journal*, but at the request of friends, and wisely we think, Dr. Hammond has added new matter, and published it in a more permanent and accessible form. It contains four chapters—On the Physiology of Sleep; the Pathology of Wakefulness; the Exciting Causes of Wakefulness; and the Treatment of Wakefulness. Contrary to the views of many writers, he believes that sleep is not caused by a congested state of the brain, but by a diminished supply of blood, and cites in corroboration of this theory

the results of various experiments upon animals, observations made upon patients whose brains were laid bare by accidents, and the physiological effects of certain natural agents and drugs.

Accepting this as the explanation of the physiology of sleep, the pathology of insomnia is of course reduced to an active or passive, hyperæmic condition of the brain, and the exciting causes of this abnormal state are simply circumstances which increase the cerebral circulation. These are enumerated by Dr. Hammond as follows:— "1st. By long-continued or excessive intellectual action, or any powerful emotion of the mind. 2d. Those positions of the body which tend to impede the flow of blood from the brain, and at the same time do not obstruct its passage through the arteries, while causing hyperæmia, also produce insomnia. 3d. An increased amount of blood is determined to the brain, and wakefulness is produced by certain substances used as food or medicine. 4th. Wakefulness is also caused by functional derangements of certain organs of the body, whereby an increase of the blood in the brain is produced."

The treatment of insomnia, as recommended in the concluding chapter, is very simple, and consists almost wholly in hygienic measures. The book contains reports of many interesting cases, and is published in a very neat form.

The Principles of Surgery. By James Syme, F.R.S.E., Professor of Clinical Surgery in the University of Edinburgh, &c. &c. To which are appended his Treatises on "The Diseases of the Rectum," "Stricture of the Urethra and Fistula in Perineo," "The Excision of Diseased Joints," and numerous additional contributions to the Pathology and Practice of Surgery. Edited by his former pupil, Donald McLean, M.D., L.R.C.S.E., Professor of the Institutes of Medicine and Lecturer on Clinical Surgery, Queens University, Canada. 8vo. Pp. 880. Philadelphia: J. B. Lippincott & Co., 1866.

It is now more than thirty years since an edition of Mr. Syme's Principles appeared in this country, and although five editions of the work have been published in the meanwhile in Great Britain, the later writings of this distinguished teacher of Surgery have hitherto been inaccessible to the American reader. Even now we are indebted to a member of our profession in Canada for this the most complete collection of his works yet published. Prof. McLean, in compliance, as he states, with numerous and urgent requests of his professional brethren here and in Canada, addressed a communication to Prof. Syme, to which he replied: "As to your proposal of republication in America, I have long desired that what I have written should be known in a pure form, and will therefore feel much obliged by your undertaking the task." As will be seen by the title the editor has added to the Principles some of the most important treatises of his old teacher on various subjects connected with surgery, as well as contributions made from time to time to medical journals.

As to the scientific character of Prof. Syme's views, it is not our intention to speak. Our readers are without doubt generally familiar with them, for he is a man who has never allowed them to fall into obscurity for want of personal energy in their promulgation or de-

fence. Valuable as they are as the principles which have been so long taught in this distinguished school of medicine, they do not supply the wants of a text book as now understood. They are the record of personal experience and convictions, and are largely wanting in those practical details and generalizations from the whole history of surgery, which are so essential to a complete handbook. He states that it has not been his aim "to collect all that might be said in regard to each subject, but rather to select what seemed of most importance, and arrange it in a convenient order for teaching or study, so as to constitute a framework of surgical science, which might be filled up through the gradual acquisition of professional knowledge." The appendix comprises more practical matter, however, and several of the treatises there found are well known and excellent monographs.

Prof. McLean introduces in the preface of the American edition, a highly laudatory account by Dr. John Brown, of Edinburgh, of the personal qualities of Prof. Syme, which shows that he possesses friends who at least love much, if not always wisely. Our readers will remember an occasion recorded not long since in the Journal, where this affection betrayed the respected author of *Horæ subsecivæ* into a situation which little became him, that of an accomplice in the public immolation of a scientific pamphlet. It is thus that the latter writes of his "old master and friend." "As an instrument for discovering truth I have never seen his perspicacity equalled. His mental eye is achromatic, and admits into the judging mind a pure white light, and records an undisturbed, uncolored image, undiminished and unenlarged in its passage; and he has the moral power, courage, and conscience to use and devote such an inestimable image aright."

We cannot too highly commend the beautiful style in which the publisher has done his work. In paper, in type and all which makes up a handsome book, we have seldom seen its equal among medical publications in this country.

On Diseases, Injuries, and Malformations of the Rectum and Anus; with Remarks on Habitual Constipation. By T. J. Ashton, formerly Surgeon to the Blenheim Dispensary, &c. With Illustrations. Second American from the Fourth and Revised English Edition. 8vo. Pp. 287. Philadelphia: Henry C. Lea. 1865.

The short period which has elapsed since the appearance of the former American reprint, and the numerous editions published in England, are the best arguments we can offer of the merits, and of the uselessness of any commendation on our part of a book already so favorably known to our readers. The author has re-written some portions of, and added further cases to the present edition. The American publisher has issued it in clear type and on good paper.

During the year 1865, the whole number of deaths in Providence, R. I., was 1,210, or 71 less than in 1864. The most marked feature of the mortality for the year 1865 was the large number of deaths from scarlet fever in the first four months, and from typhoid fever in the last four months of the year. The population of the city by the census of 1865, was 54,595, which gives one death in 45·1 for the year.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JANUARY 25, 1866.

Discovery of the Cause of Intermittent Fever, by Dr. J. H. Salisbury.—One of the most important discoveries of modern times in the ætiology of disease has just been modestly announced in the pages of the *American Journal of the Medical Sciences*, by Dr. J. H. Salisbury, Professor of Physiology, Histology and Pathology in the Cleveland Charity Hospital Medical College; this is no less than the discovery by him of the organic cause of intermittent and remittent fevers. Distinguished already by his remarkable discovery of the origin of a form of measles from a species of fungus growing upon wheat straw, his present discovery places him in the very foremost rank of those whose researches have conferred a wide-spread and lasting blessing on mankind. Few problems in pathology have taxed the ingenuity and theoretical faculties of the medical profession to such a degree as the question which Dr. Salisbury has solved, and few have led to such crude and unsatisfactory results. The sum of all heretofore known on the subject has been, that in certain localities adjacent to water courses, marshy, or freshly-broken alluvial soil, in the warmer regions of the earth, where the geological formation is of the more recent periods, at certain seasons of the year, a poisonous influence is given out, known under the comprehensive term *miasma*, which produces certain forms of fever. This poisonous atmosphere has hung like a spell over some of the fairest regions of the earth, making the spots of all others most attractive to the imagination the most deadly to human life. We can, therefore, hardly overestimate the value of Dr. Salisbury's observations, substantiated, as they seem to be, by the most patient investigation and experiment, and demonstrating the way by which the wide-spread diseases which they explain may be in most instances entirely averted.

It is to the faithful use of the microscope that Dr. Salisbury owes the discovery which has unlocked this profound secret, and which has taken these diseases out of the mysterious category which some have felt inclined to ascribe to the direct agency of the great First Cause. A secondary cause has proved to be the agent, but of so subtle a minuteness that mankind has been obliged to wait for the modern application of improved instruments of investigation, to show that it is none the less material and appreciable by the senses. In a word, Dr. Salisbury has discovered that the minute spore of a cryptogamic plant, floating in the moist vapor of the malarious regions where remittent and intermittent fevers abound, is the deadly poison which has been such a scourge for ages, the *fons et origo mali*. This is a little oblong cell, "consisting of a distinct nucleus, surrounded by a smooth cell-wall, with a highly clear, apparently empty space between the outer cell-wall and nucleus," of an algoid type, resembling strongly the cells of palmellæ. These cells Dr. S. first detected in great numbers in the expectoration of patients suffering from intermittent fever and those residing on ague levels and exposed during

evening, night and morning to the damp exhalations and vapors of such localities. The salivary secretions contained microscopic cells and other bodies, but the only constant bodies found in every case examined were the cells in question. These he proceeded to collect from the poisonous localities by suspending plates of glass about one foot above the partially submerged marshy grounds and stagnant pools of such localities during the night. Invariably, in the morning, the under side of the glass was found to be coated with drops of water containing many of the microscopic bodies detected in the expectoration referred to above, but none of the peculiar cells; these were found in considerable numbers on the upper surface of the glass only. Repeated experiments in various localities produced, in all instances, the same results. In prosecuting his researches, Dr. Salisbury discovered the source of the algoid cells, fully confirming his impression of their real character. We quote from his memoir as follows:—

"In passing to the stagnant pools and swampy grounds southeast of the city of Lancaster, Ohio, to suspend the glass plates, I had to pass over a rich, peaty prairie bog, where the water had become mostly dried off, and the surface broken by the tread of cattle. I had noticed that in walking over this ground, a peculiar dry feverish sensation was always produced in the throat and fauces, often extending to the pulmonary mucous surfaces, and that my expectoration was, after returning, filled with the minute oblong cells above described. This drew my attention to the partially desiccated peaty bog, where the surface had been recently broken by the tread of cattle. I discovered on the recently exposed earth, what appeared to be a whitish mould, or more closely the incrustation of some salt. I here suspended the plates of glass, and the following morning, much to my delight, found the inferior surface of the plates covered with the minute cells, which I was in pursuit of. I immediately returned to the bog and secured samples of fresh earth, which were covered with the incrustation, and some which were not, and also portions of the boggy turf. On placing a fragment of the incrustation under the microscope, it was at once discovered to be made up of aggregated masses of the minute cells so uniformly met with in the expectoration of those exposed to the influence of the heavy cool vapors of malarial levels. It was further seen that these cells were algoid, and emanated from plants of a palmelloid type, as we had previously suspected; that there were several species, and that in the larger ones, grew several species of mucedinous fungi."

Other ingenious experiments showed the height to which these microscopic bodies are raised above the surface, leading to the following results:—

"1. That cryptogamic spores and other minute bodies are mainly elevated above the surface during the night. That they rise and are suspended in the cold, damp exhalations from the soil, after the sun has set, and that they fall again to the earth soon after the sun rises.

"2. That in the latitude of Ohio, these bodies seldom rise above from thirty-five to sixty feet above the low levels. That in the northern and central portions of the State, they rise from thirty-five to forty-five feet, while in the southern, from forty to sixty feet.

"3. That at Nashville and Memphis, they rise from sixty to one hundred feet and more above the surface.

"4. That above the summit plane of the cool night exhalations, these bodies do not rise, and intermittents do not extend.

"5. That the day air of malarial districts is quite free from these palmelloid spores, and from causes that produce intermittents."

Pursuing his researches Dr. Salisbury visited many ague-infected districts, and in every instance was able to demonstrate the existence in such places of the ague palmellæ ; some of the cases which he relates in illustration are exceedingly curious, demonstrating with absolute conclusiveness their agency as the morbific cause, but want of space prevents our quoting them. In some instances, where intermittent fever has recently appeared in a locality never before infested, he was able to trace it to an abundant growth of the poisonous algoid on the sides of a newly opened ditch close by, which had never been suspected before of being the source of the disease. Finally Dr. Salisbury applied the crucial test to his theory of the malarial potency of these plants, by direct experiment as follows :—

"I filled six tin boxes with the surface earth from a decidedly malarious drying prairie bog, which was covered completely with the palmellæ previously described. Cakes of the surface soil were cut out, the size and depth of the boxes, and fitted carefully in, without disturbing more than possible the surface vegetation. The covers were then placed on, and the boxes transported to a high, hilly district, some five miles distant from any malarious locality, and where a case of ague had never been known to occur. The locality was over three hundred feet above the stream levels, was dry, sandy, and rocky. I here placed the boxes of cryptogams on the sill of an open second-story window, opening into the sleeping apartment of two young men ; removed the covers and gave particular directions that the boxes should not be disturbed, and the window left open. On suspending a plate of glass over the boxes on the fourth day, during the night, the under surface of the plate, the following morning, was found covered with palmelloid spores, and numerous cells of the same kind adhered to a suspended plate in the room, which was moistened with a concentrated solution of chloride of calcium.

"On the twelfth day, one of the young men had a well-marked paroxysm of ague, and on the fourteenth the other was taken down with the disease. They both began to feel unnatural and dull about the sixth day. All three stages of the paroxysms were well marked. The type in both cases was tertian, and was readily controlled by the appropriate remedies.

"Four members of the family slept on the lower floor of the house, but none of them were affected."

Other experiments produced similar results ; certainly nothing could be more conclusive.

Turning once more to the subjects of intermittent fever Dr. Salisbury found that "ague plants, the same as grown upon the ague soil, are constantly developing in the system of the intermittent fever patient ; and that the urinary organs constitute one important outlet for the elimination of this fever vegetation. . . . . This explains to us the important reason, why it is that quinia breaks the continued

recurrence of the paroxysms, while it does not eradicate the poison; and why diuretics and diaphoretics and expectorants are such all-important aids in eliminating from the system the malarial cryptogams. . . . . The ague plants occur in the urine in the form of little cottony flocks, so small that they are scarcely noticeable by the unaided eye, and too few in number to communicate turbidity to the excretion. They vary greatly in amount present in different cases. They are uniformly more abundant when the disease is severe and has continued for some time. They are very light in color, highly transparent, and appear to be developed in the bladder, pelves of the kidneys and ureters, often in considerable numbers."

Dr. Salisbury describes no less than five species of these poisonous plants, to which he gives the generic name of *Gemiasma.* To another type he gives the generic name of *Protuberans.* We are unable to copy his interesting descriptions of them. We will only add, that sprinkling the surfaces on which they grow with caustic lime is sure to prevent the development of the ague plants.

We have thus given a hasty sketch of what strikes us as one of the most valuable discoveries in medical science ever made, and worthy to be classed with the discovery of the protective power of vaccination and the pain-destroying power of anæsthetics.

We have received a communication on the subject referred to in our last two numbers, "A question which should be settled," signed F.M.M.S., as follows:—

Messrs. Editors:—In your issue of January 11th, is an article in regard to "a question that should be settled." I am most happy to see the spirit of candor and good feeling which it breathes. It exhibits none of the feelings of unkindness of which it speaks.

The question, as I understand it, is—not whether the New England Female Medical College furnishes a good and regular medical education to its pupils—"*that is an entirely different issue*"* — but simply whether the By-laws of the Massachusetts Medical Society allow its members to professionally treat persons of the female sex as regular practitioners of medicine.

Upon this question I beg leave to say, in the first place, that I think it quite probable, to say the least, that the framers of those By-laws never so much as even dreamed that a woman ever would or could acquire a good and regular medical education. And yet there is no evidence in those By-laws that they did not. Certain it is that if they had, and if they had *intended* to provide for such a contingency, they would have been very likely to have framed the article in question just as we find it. For, we have in our language nouns which do not at all designate the gender of the person spoken of, but are used to designate a human being of either sex. The word "person" is such a noun, and the framers saw fit (and no doubt for some good reason), to use this very word when defining who might become members of the Society, in the first article, and also again in the eighth article designating whom the members of the Society should regard and treat as

* That is right—"One war at a time."

irregular practitioners. But unfortunately we have not in our language any pronoun of common gender corresponding with the French pronoun "*on.*" Consequently we are not very unfrequently compelled to use one that is either masculine or feminine, after, or instead of, a noun of common gender, and it is distinctly recognized by all grammarians as well as by all good writers as the *rule* in such cases, to use the masculine pronoun after a noun of common gender, as is the word person; for instance, we say, Every person should speak the truth with *his* neighbor. *He* should be honest in *his* dealings. In the Statute Laws of this State we read, "No person shall be held to answer on a second indictment for an offence of which *he* has been acquitted, &c.—"*Quæ cum ita sunt,*" I most confidently submit that by any fair interpretation the By-laws in question do not specify and were *not designed* to specify the *sex* of the "persons" who may be admitted to membership of the Society, or who may be treated as regular practitioners by its members. The word "person" as there used evidently means any human being.

In regard to the "common feeling," of which the writer speaks, I beg simply to suggest, that so far as I know (and I have some little acquaintance over the State) those feelings and expressions of unkindness, bitterness and contempt he mentions are *very much* confined to *Boston* and its immediate vicinity.

The remainder of the communication is devoted to an historical account of the course of Boston with regard to female education, not specially relevant to the subject in hand, and the pressure on our pages this week compels us to omit it.

In reply to the above we have only to say, that be the opinions on the subject what they may, the question should be settled *by authority.* The simple fact that female medical practitioners were not thought of by the founders of the Massachusetts Medical Society is to our minds a most cogent reason for the action of the Society now.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, JANUARY 20th, 1866.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	41	40	81
Ave. mortality of corresponding weeks for ten years, 1853—1863	41.3	40.2	81.5
Average corrected to increased population - - - -	00	00	87.62
Death of persons above 90 - - - - - - - -		1	1

DIED,—At Newton Corner, Jan. 21, Dr. Henry Bigelow, aged 48 years.—At St. Albans, Vt., Jan. 15, Dr. H. F. Stevens, aged 48 years.

DEATHS IN BOSTON for the week ending Saturday noon, January 20th, 81. Males, 41—Females 40. Accident, 1—aneurism, 1—apoplexy, 2—inflammation of the bowels, 1—congestion of the brain, 1—disease of the brain, 3—inflammation of the brain, 2—bronchitis, 1—burns, 1—cancer, 4—consumption, 20—convulsions, 1—croup, 3—diphtheria, 1—dropsy, 2—dropsy of the brain, 3—drowned, 1—exposure, 2—scarlet fever, 1—typhoid fever, 1—gastritis, 1—disease of the heart, 3—infantile disease, 1—leucocythæmia, 1—disease of the liver, 1—congestion of the lungs, 1—inflammation of the lungs, 6—old age, 1—phlegmasia dolens, 1—phlebitis, 1—premature birth, 1—rheumatism, 1—scalded, 1—smallpox, 1—stricture of the œsophagus, 1—tumor, 1—unknown, 6.

Under 5 years of age, 18—between 5 and 20 years, 10—between 20 and 40 years, 21—between 40 and 60 years, 20—above 60 years, 12. Born in the United States, 52—Ireland, 23—other places, 6.

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